American Chain
&
Cable Company

AMERICAN CHAIN COMPANY

INCORPORATED

·A·C·
Co
TRADE MARK REG.U.S.PAT.OFF.

BRIDGEPORT, CONNECTICUT.
U.S.A.

CATALOGUE D

American Chain Company

Incorporated

TRADE MARK REG. U.S. PAT. OFF.

CATALOGUE D

Copyright, by American Chain Company, Inc.

GENERAL SALES OFFICE
BRIDGEPORT, CONN.

DISTRICT SALES OFFICES

BOSTON, MASSACHUSETTS
CHICAGO, ILLINOIS
NEW YORK, N. Y.
PHILADELPHIA, PENNSYLVANIA
PITTSBURGH, PENNSYLVANIA
PORTLAND, OREGON
SAN FRANCISCO, CALIFORNIA

EXECUTIVE OFFICES
BRIDGEPORT, CONNECTICUT

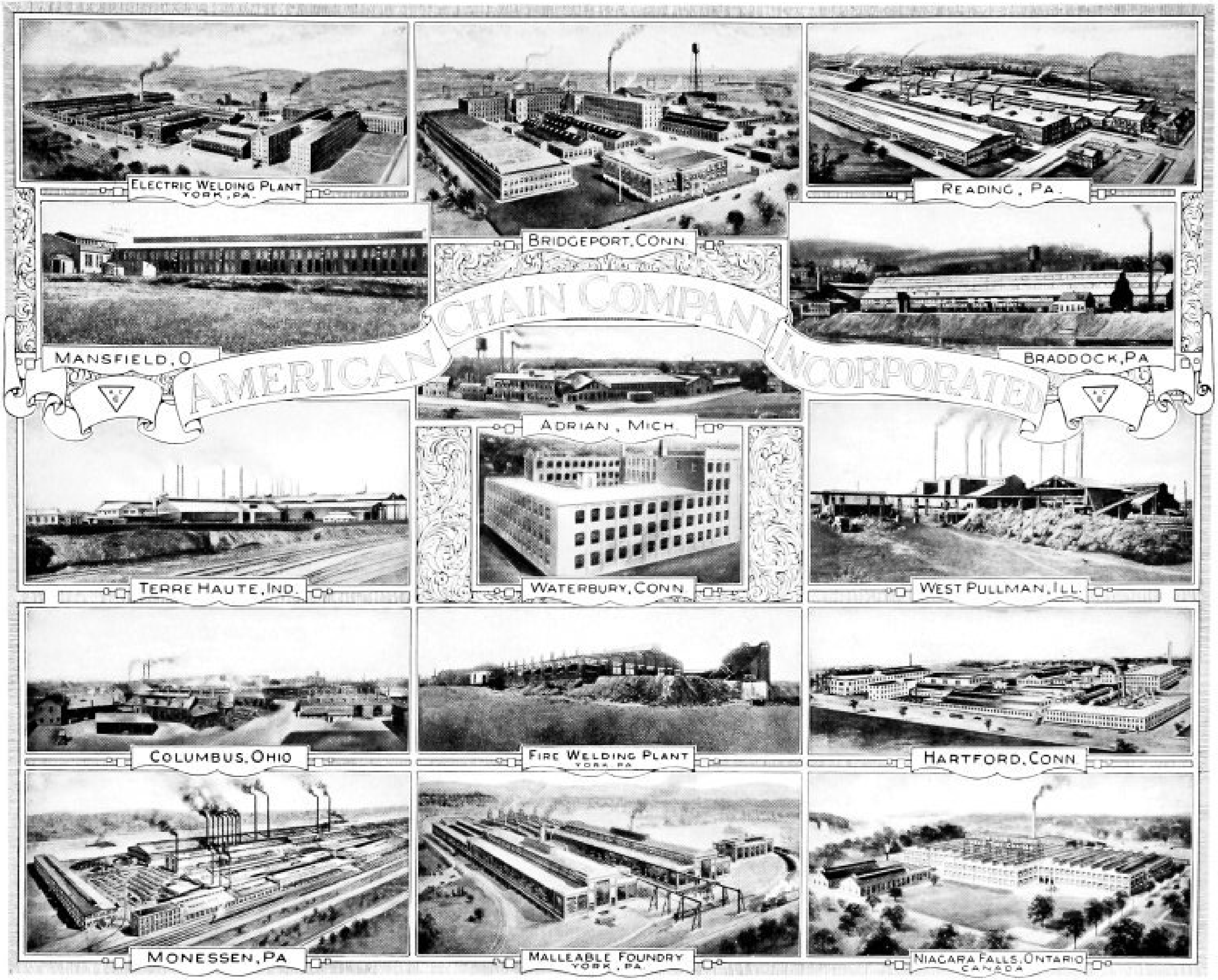
FACTORIES

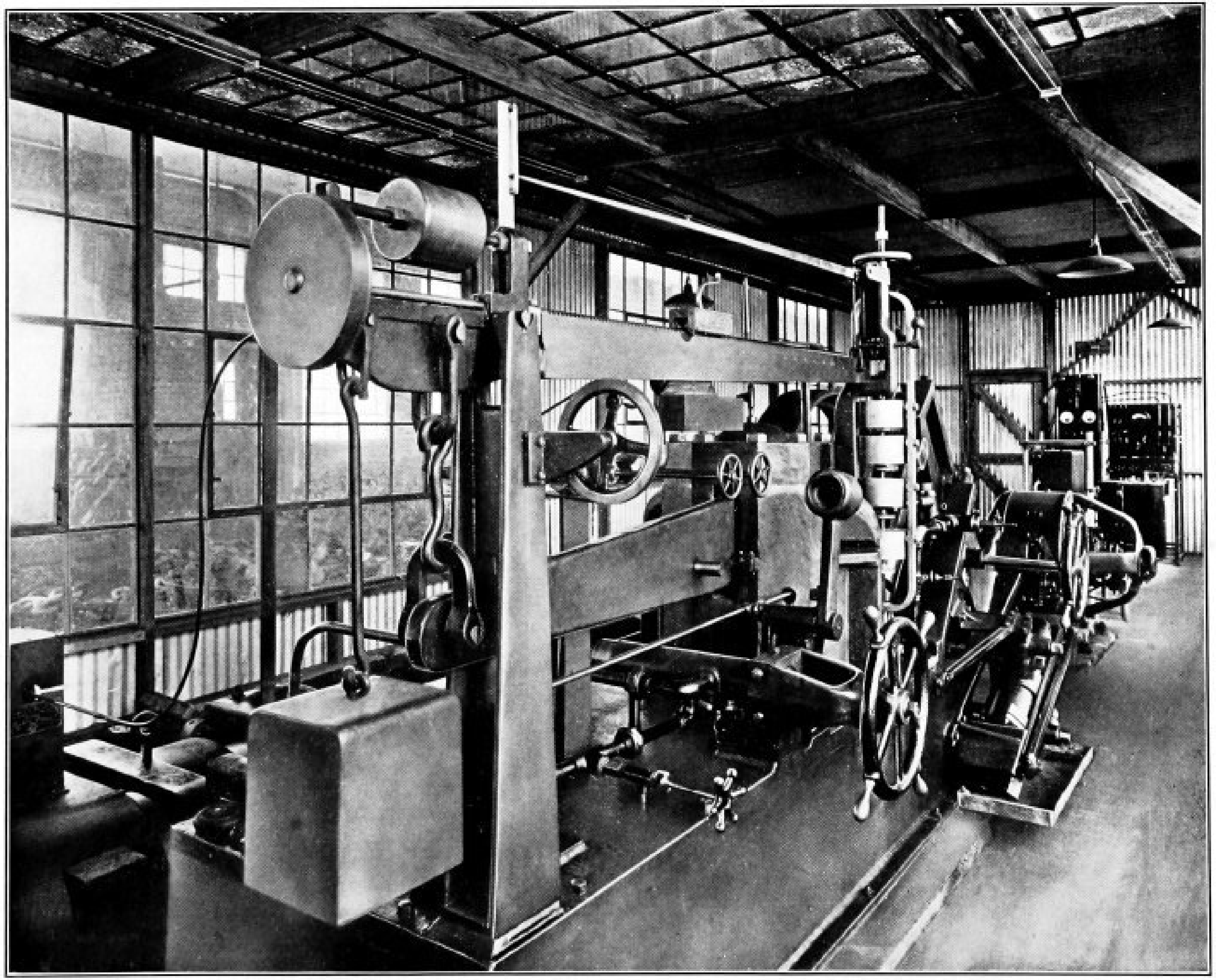
BRIDGEPORT, CONNECTICUT
WATERBURY, CONNECTICUT
BRADDOCK, PENNSYLVANIA
READING, PENNSYLVANIA
ADRIAN, MICHIGAN
HARTFORD, CONNECTICUT
COLUMBUS, OHIO
MANSFIELD, OHIO
MONESSEN, PENNSYLVANIA
YORK, PENNSYLVANIA
WEST PULLMAN, ILLINOIS
TERRE HAUTE, INDIANA

In Canada: DOMINION CHAIN COMPANY, LIMITED,
NIAGARA FALLS, ONTARIO

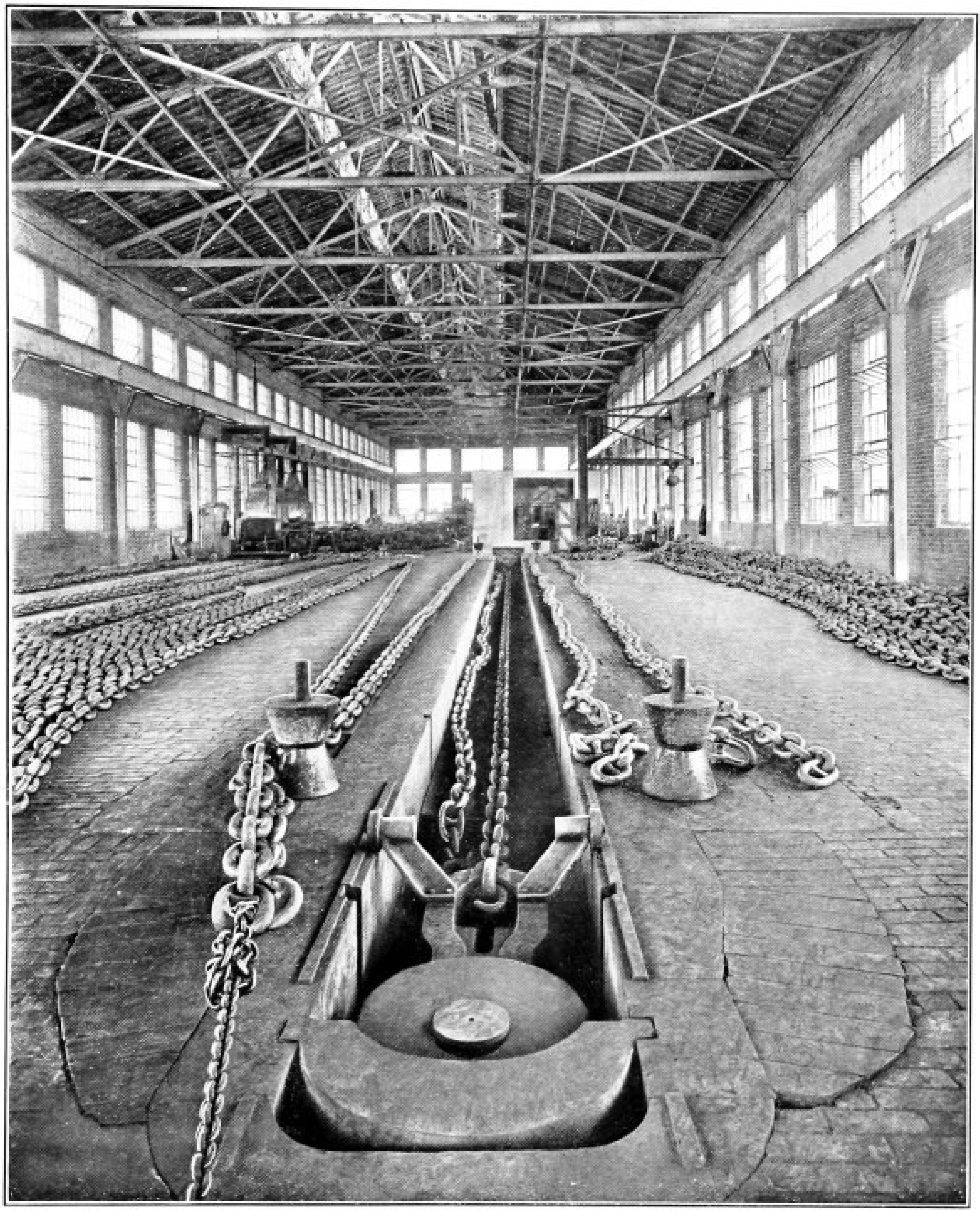
12904

ACCO
A·C
Hull
·A·C·
Co
TRADE MARK


AMERICAN CHAIN COMPANY INCORPORATED
ELECTRIC WELDING PLANT YORK, PA.
BRIDGEPORT, CONN.
READING, PA.
MANSFIELD, O.
BRADDOCK, PA
ADRIAN, MICH.
TERRE HAUTE, IND.
WATERBURY, CONN.
WEST PULLMAN, ILL.
COLUMBUS, OHIO
FIRE WELDING PLANT YORK, PA.
HARTFORD, CONN.
MONESSEN, PA
MALLEABLE FOUNDRY YORK, PA.
NIAGARA FALLS, ONTARIO CANADA



ONE OF OUR SPECIAL 2,000,000-POUND TESTING MACHINES



END VIEW OF TESTING MACHINE ILLUSTRATED ON PRECEDING PAGE, SHOWING CHAIN IN POSITION READY FOR TESTING

Foreword

THE various types of chain and accessories illustrated and described in this Catalogue constitute our regular production. Wherever these will serve the required purpose we recommend they be specified, to simplify and expedite the execution of orders.

Experience has shown that special construction and attachments are often required. Our equipment and facilities are such that we are in a position to supply practically any construction or combination of chain.

We maintain an Engineering Department to solve chain problems, and special items will receive their consideration.

Welded Chain

IN this section we illustrate and describe Welded Chain and Attachments.

Our product is the result of the careful study and application of modern manufacturing methods. These, with the use of materials produced in our own plants, combined with a thorough system of inspection, insure the maximum of efficiency for the purpose intended.

Useful Information

1. No welded chain is safe unless actually tested. Our proof tests will be found on the pages following the various types of chain.

2. The safe working load should not exceed one-quarter to one-third of the breaking strain. The size chain required for a given safe working load is indicated by tables and curves on following pages.

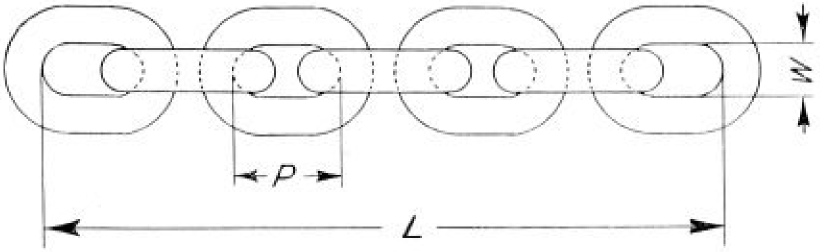
3. The distance from the center of one link to the center of the next, which is equal to the inside length of the link, is known as the pitch. For method of measuring chain see page 3.

4. All Welded Chain, unless ordered in *exact size*, is furnished one thirty-second of an inch full. For example, one-inch Proof Coil Chain is made from rods the actual diameter of which is thirty-three thirty-seconds of an inch.

5. The life of a chain can be prolonged by frequent lubrication. A chain subject to severe usage should be oiled at the bearing surfaces between the links. This is particularly true of Dredge Chain.

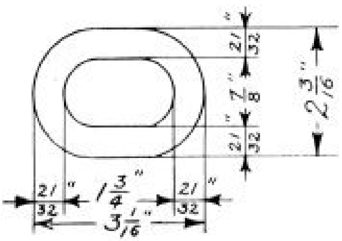
6. When a Dredge Chain is removed to be repaired, it is essential that the chain be replaced so that the links will lie in the same plane as they did before being removed. Observance of this rule will add considerable to the life of the chain. By marking some of the links before removing the chain, this can very easily be accomplished.

Method of Measuring Chain Links

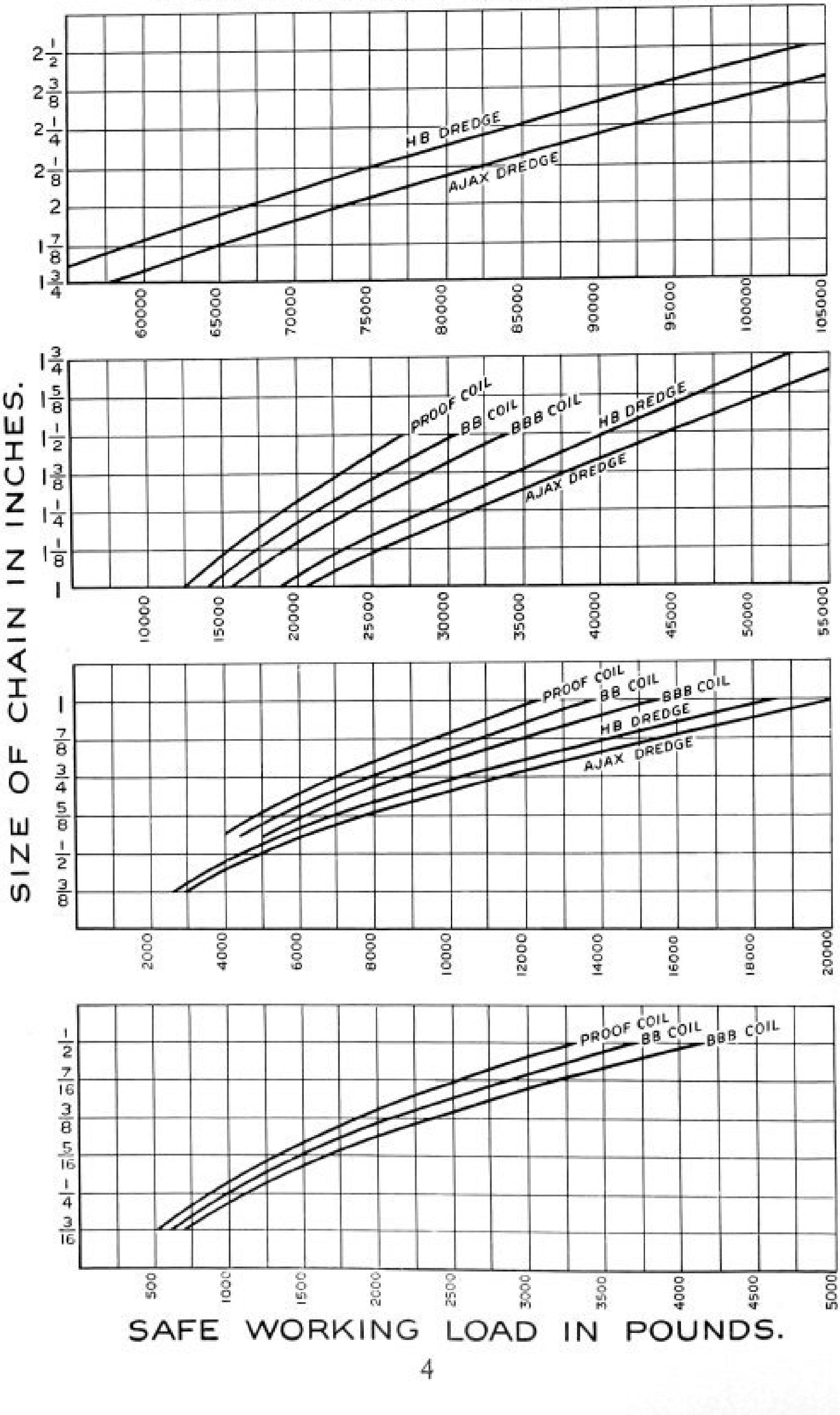


To find the dimensions of the links in a chain, measure the inside length "L," as shown above, and divide this by the number of links. The quotient will give the inside length "P," which is the essential factor in determining the number of links required to make up a given length of chain. The inside width "W" can be calipered and should be amply large to allow the adjacent links to bottom with sufficient clearance. The outside dimensions of the links can be determined by adding to the inside dimensions twice the diameter of the material.

Example: A piece of $\frac{5}{8}$-inch chain with a reach of 14 inches and made up of 8 links.
Size of material in links = $\frac{21}{32}$ inch.
Inside length of links = $\frac{14}{8}$ inches = $1\frac{3}{4}$ inches.
Outside length of links = ($1\frac{3}{4}$ inches + $1\frac{5}{16}$ inches) = $3\frac{1}{16}$ inches.
Inside width of links = $\frac{7}{8}$ inch.
Outside width of links = ($\frac{7}{8}$ inch + $1\frac{5}{16}$ inches) = $2\frac{3}{16}$ inches.



SAFE WORKING LOAD CURVES.



Finishes

OUR finishing and metal-treating equipment, to which we are constantly adding new devices and processes, enables us to furnish any finish or special-treated chain that may be required. The standard finishes are as follows:

Bright or Polished: All scale and rough spots are removed, leaving a smooth, polished surface.

Blacked: A dull black coating which will prevent early rusting. Mostly used on heavy welded chain.

Japanned (Baked): This finish gives a black, glossy coating and is generally used on Harness Hardware items.

XC or Tinned: Obtained by immersing the product in a hot bath of tin, and chiefly used on Harness Hardware items.

Cold Galvanized (S. R. P.): Obtained by zinc electroplating.

Hot Galvanized: The best rust preventive known.

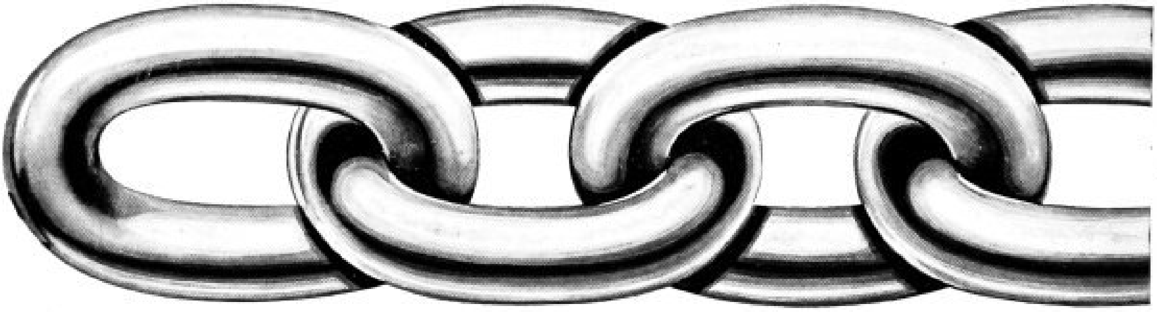
Hercules: Obtained by copper electro-plating over hot-galvanizing.

Nickel: Obtained by nickel electro-plating.

Brass: Obtained by brass electro-plating.

When ordering, always state the finish wanted.

Proof Coil Chain



Proof Coil, or Common Coil, Chain is made from open-hearth basic steel, or iron, as ordered. Steel chain is furnished unless otherwise specified.

Supplied Self-colored unless otherwise ordered.

Furnished in continuous lengths or in short sections, as required. If enlarged end links, shackles, hooks, rings or other attachments are wanted, it should be clearly specified; otherwise chain will be supplied without attachments.

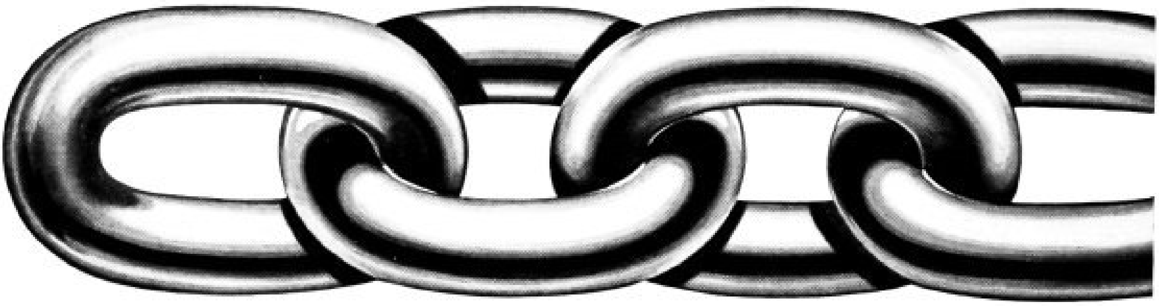
Sizes, dimensions, etc., on following page.

Proof Coil Chain

Trade Size in Inches	Size Material in Inches	Inside Length in Inches	Inside Width in Inches	Outside Length in Inches	Outside Width in Inches	Links per Foot	Weight per 100 Feet Pounds	Average Breaking Test Pounds	Proof Test Pounds	Safe Working Load Pounds
3/16	7/32	61/64	13/32	1 25/64	27/32	12 1/2	40	2,090	1,045	520
1/4	9/32	1	1/2	1 9/16	1 1/16	12	70	3,600	1,800	900
5/16	11/32	1 7/64	1/2	1 51/64	1 3/16	10 3/4	105	5,440	2,720	1,360
3/8	13/32	1 15/64	5/8	2 3/64	1 7/16	9 3/4	158	7,440	3,720	1,860
7/16	15/32	1 3/8	3/4	2 5/16	1 11/16	8 3/4	210	10,000	5,000	2,500
1/2	17/32	1 1/2	13/16	2 9/16	1 7/8	8	275	13,200	6,600	3,300
9/16	19/32	1 3/4	7/8	2 15/16	2 1/16	6 7/8	335	16,400	8,200	4,100
5/8	21/32	1 7/8	1	3 3/16	2 5/16	6 3/8	410	20,000	10,000	5,000
11/16	23/32	2	1 1/16	3 7/16	2 1/2	6	500	23,840	11,920	5,960
3/4	25/32	2 1/8	1 1/8	3 11/16	2 11/16	5 5/8	580	28,300	14,150	7,075
7/8	29/32	2 1/2	1 3/8	4 5/16	3 3/16	4 3/4	780	38,400	19,200	9,600
1	1 1/32	2 3/4	1 1/2	4 13/16	3 9/16	4 3/8	1000	49,600	24,800	12,400
1 1/8	1 5/32	3 1/8	1 3/4	5 7/16	4 1/16	3 7/8	1270	62,400	31,200	15,600
1 1/4	1 9/32	3 1/4	1 7/8	5 13/16	4 7/16	3 3/4	1560	76,800	38,400	19,200
1 3/8	1 13/32	3 7/8	2	6 11/16	4 13/16	3 1/8	1860	92,000	46,000	23,000
1 1/2	1 17/32	4 1/8	2 1/8	7 3/16	5 3/16	2 7/8	2200	108,800	54,400	27,200

Dimensions and weights are approximate

BB Coil Chain



BB Coil Chain is made from open-hearth basic steel, or iron, as ordered. Steel chain is furnished unless otherwise specified.

This is a closer link chain than Proof Coil and greater care is exercised in its manufacture, making a good strong chain for general use.

Supplied Blacked unless otherwise ordered.

Test certificate furnished if desired.

Furnished in continuous lengths or in short sections, as required. If enlarged end links, shackles, hooks, rings or other attachments are wanted, it should be clearly specified; otherwise chain will be supplied without attachments.

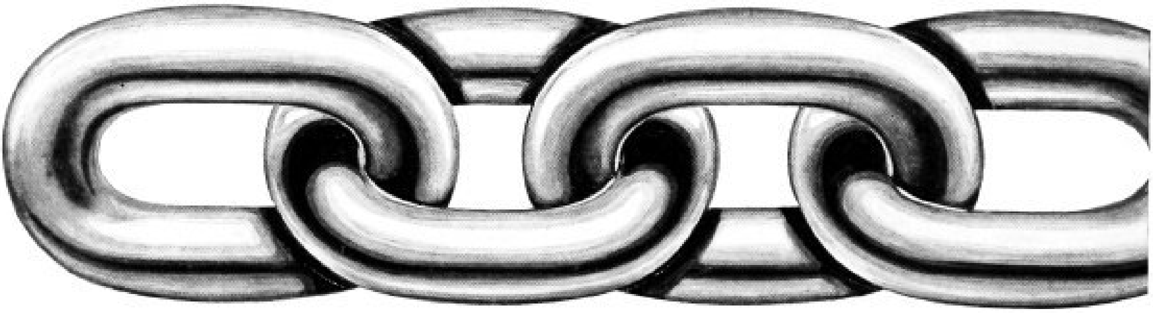
Sizes, dimensions, etc., on following page.

BB Coil Chain

Trade Size in Inches	Size Material in Inches	Inside Length in Inches	Inside Width in Inches	Outside Length in Inches	Outside Width in Inches	Links per Foot	Weight per 100 Feet Pounds	Average Breaking Test Pounds	Proof Test Pounds	Safe Working Load Pounds
$\frac{3}{16}$	$\frac{7}{32}$	$\frac{55}{64}$	$\frac{3}{8}$	$1\frac{19}{64}$	$\frac{13}{16}$	14	42	2,310	1,155	580
$\frac{1}{4}$	$\frac{9}{32}$	$\frac{29}{32}$	$\frac{7}{16}$	$1\frac{15}{32}$	1	$13\frac{1}{4}$	75	4,050	2,025	1,010
$\frac{5}{16}$	$\frac{11}{32}$	$1\frac{1}{32}$	$\frac{1}{2}$	$1\frac{23}{32}$	$1\frac{3}{16}$	$11\frac{3}{4}$	112	6,100	3,050	1,525
$\frac{3}{8}$	$\frac{13}{32}$	$1\frac{5}{32}$	$\frac{5}{8}$	$1\frac{31}{32}$	$1\frac{7}{16}$	$10\frac{1}{2}$	162	8,350	4,175	2,090
$\frac{7}{16}$	$\frac{15}{32}$	$1\frac{19}{64}$	$\frac{11}{16}$	$2\frac{15}{64}$	$1\frac{5}{8}$	$9\frac{1}{4}$	215	11,250	5,625	2,810
$\frac{1}{2}$	$\frac{17}{32}$	$1\frac{13}{32}$	$\frac{3}{4}$	$2\frac{15}{32}$	$1\frac{13}{16}$	$8\frac{1}{2}$	285	14,850	7,425	3,710
$\frac{9}{16}$	$\frac{19}{32}$	$1\frac{5}{8}$	$\frac{3}{4}$	$2\frac{13}{16}$	$1\frac{15}{16}$	$7\frac{3}{8}$	345	18,450	9,225	4,610
$\frac{5}{8}$	$\frac{21}{32}$	$1\frac{3}{4}$	$\frac{7}{8}$	$3\frac{1}{16}$	$2\frac{3}{16}$	$6\frac{7}{8}$	425	22,500	11,250	5,625
$\frac{11}{16}$	$\frac{23}{32}$	$1\frac{7}{8}$	$\frac{15}{16}$	$3\frac{5}{16}$	$2\frac{3}{8}$	$6\frac{3}{8}$	515	26,800	13,400	6,700
$\frac{3}{4}$	$\frac{25}{32}$	2	1	$3\frac{9}{16}$	$2\frac{9}{16}$	6	605	31,800	15,900	7,950
$\frac{7}{8}$	$\frac{29}{32}$	$2\frac{3}{8}$	$1\frac{1}{4}$	$4\frac{3}{16}$	$3\frac{1}{16}$	5	815	43,200	21,600	10,800
1	$1\frac{1}{32}$	$2\frac{5}{8}$	$1\frac{3}{8}$	$4\frac{11}{16}$	$3\frac{7}{16}$	$4\frac{1}{2}$	1030	55,800	27,900	13,950
$1\frac{1}{8}$	$1\frac{5}{32}$	3	$1\frac{11}{16}$	$5\frac{5}{16}$	4	4	1300	70,200	35,100	17,550
$1\frac{1}{4}$	$1\frac{9}{32}$	$3\frac{1}{8}$	$1\frac{3}{4}$	$5\frac{11}{16}$	$4\frac{5}{16}$	$3\frac{7}{8}$	1585	86,400	43,200	21,600
$1\frac{3}{8}$	$1\frac{13}{32}$	$3\frac{3}{4}$	$1\frac{7}{8}$	$6\frac{9}{16}$	$4\frac{11}{16}$	$3\frac{1}{4}$	1910	103,500	51,750	25,875
$1\frac{1}{2}$	$1\frac{17}{32}$	4	2	$7\frac{1}{16}$	$5\frac{1}{16}$	3	2265	122,400	61,200	30,600

Dimensions and weights are approximate

BBB Coil Chain



BBB Coil Chain is made from open-hearth basic steel, or iron, as ordered. Steel chain is furnished unless otherwise specified. This chain is closer link than BB grade. Special care is exercised in its manufacture and only experienced chain-makers are permitted to make it.

This grade is recommended where strength and durability are required.

Supplied Blacked unless otherwise ordered.

Test certificate furnished if desired.

Furnished in continuous lengths or in short sections, as required. If enlarged end links, shackles, hooks, rings or other attachments are wanted, it should be clearly specified; otherwise chain will be supplied without attachments.

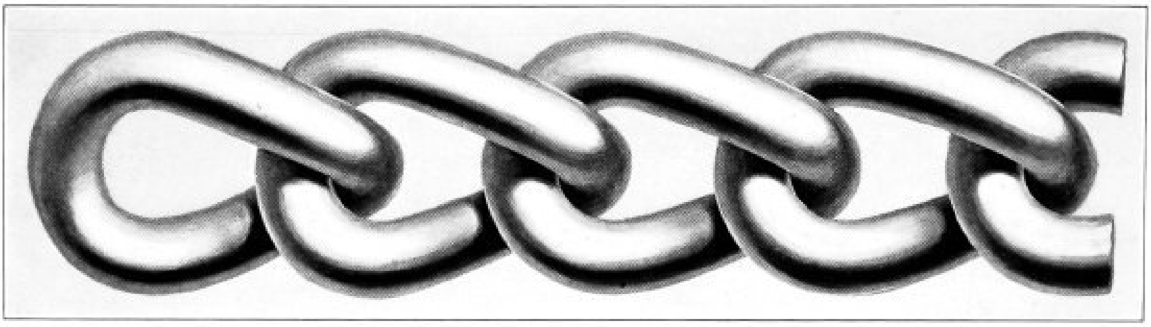
Sizes, dimensions, etc., on following page.

BBB Coil Chain

Trade Size in Inches	Size Material in Inches	Inside Length in Inches	Inside Width in Inches	Outside Length in Inches	Outside Width in Inches	Links per Foot	Weight per 100 Feet Pounds	Average Breaking Test Pounds	Proof Test Pounds	Safe Working Load Pounds
3/16	7/32	25/32	3/8	1 7/32	13/16	15 1/2	43	2,600	1,300	650
1/4	9/32	55/64	7/16	1 27/64	1	14	78	4,500	2,250	1,125
5/16	11/32	1	1/2	1 11/16	1 3/16	12	115	6,800	3,400	1,700
3/8	13/32	1 3/32	5/8	1 29/32	1 7/16	11	166	9,300	4,650	2,325
7/16	15/32	1 7/32	11/16	2 5/32	1 5/8	9 3/4	220	12,500	6,250	3,125
1/2	17/32	1 11/32	3/4	2 13/32	1 13/16	9	295	16,500	8,250	4,125
9/16	19/32	1 9/16	3/4	2 3/4	1 15/16	7 3/4	350	20,500	10,250	5,125
5/8	21/32	1 11/16	7/8	3	2 3/16	7 1/8	430	25,000	12,500	6,250
11/16	23/32	1 3/4	15/16	3 3/16	2 3/8	6 7/8	520	29,800	14,900	7,450
3/4	25/32	1 7/8	1	3 7/16	2 9/16	6 3/8	615	35,400	17,700	8,850
7/8	29/32	2 1/4	1 1/4	4 1/16	3 1/16	5 3/8	820	48,000	24,000	12,000
1	1 1/32	2 9/16	1 3/8	4 5/8	3 7/16	4 3/4	1045	62,000	31,000	15,500
1 1/8	1 5/32	2 7/8	1 5/8	5 3/16	3 15/16	4 1/8	1310	78,000	39,000	19,500
1 1/4	1 9/32	3 1/16	1 3/4	5 5/8	4 5/16	3 7/8	1600	96,000	48,000	24,000
1 3/8	1 13/32	3 5/8	1 7/8	6 7/16	4 11/16	3 1/4	1930	115,000	57,500	28,750
1 1/2	1 17/32	3 7/8	2	6 15/16	5 1/16	3 1/8	2300	136,000	68,000	34,000

Dimensions and weights are approximate

Twist Link Coil Chain



Twist Link Coil Chain is furnished regularly in sizes from $\frac{3}{16}$-inch to $\frac{1}{2}$-inch inclusive, in Proof and BB Grades.

When Twist Link Coil Chain is required, it should be specified on order.

Proof grade supplied Self-colored, BB Grade supplied Blacked, unless otherwise specified.

Twist Coil Chain is not proof-tested, as this would deform the links. The twisting is considered sufficient test.

Sizes, dimensions, etc., on the following page.

Twist Link Coil Chain

Proof Grade

Trade Size in Inches	Size Material in Inches	Inside Length in Inches	Inside Width in Inches	Links per Foot	Weight per 100 Feet Pounds
$\frac{3}{16}$	$\frac{7}{32}$	$\frac{31}{32}$	$\frac{15}{32}$	$12\frac{1}{2}$	44
$\frac{1}{4}$	$\frac{9}{32}$	$1\frac{1}{32}$	$\frac{1}{2}$	$11\frac{1}{2}$	75
$\frac{5}{16}$	$\frac{11}{32}$	$1\frac{13}{64}$	$\frac{25}{32}$	10	124
$\frac{3}{8}$	$\frac{13}{32}$	$1\frac{9}{32}$	$\frac{25}{32}$	$9\frac{1}{2}$	180
$\frac{7}{16}$	$\frac{15}{32}$	$1\frac{19}{32}$	$\frac{31}{32}$	$7\frac{1}{2}$	225
$\frac{1}{2}$	$\frac{17}{32}$	$1\frac{21}{32}$	$\frac{7}{8}$	$7\frac{1}{4}$	285

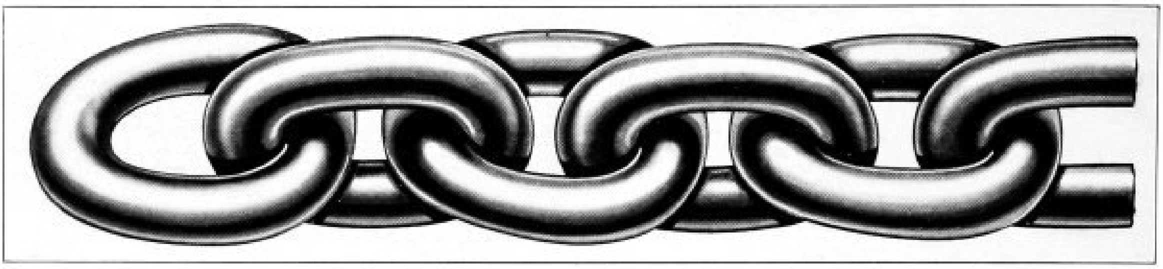
BB Grade

Trade Size in Inches	Size Material in Inches	Inside Length in Inches	Inside Width in Inches	Links per Foot	Weight per 100 Feet Pounds
$\frac{3}{16}$	$\frac{7}{32}$	$\frac{25}{32}$	$\frac{15}{32}$	$15\frac{1}{2}$	49
$\frac{1}{4}$	$\frac{9}{32}$	$\frac{61}{64}$	$\frac{19}{32}$	$12\frac{1}{2}$	78
$\frac{5}{16}$	$\frac{11}{32}$	$1\frac{1}{64}$	$\frac{21}{32}$	$11\frac{3}{4}$	122
$\frac{3}{8}$	$\frac{13}{32}$	$1\frac{5}{32}$	$\frac{25}{32}$	$10\frac{1}{2}$	185
$\frac{7}{16}$	$\frac{15}{32}$	$1\frac{5}{16}$	$\frac{31}{32}$	9	235
$\frac{1}{2}$	$\frac{17}{32}$	$1\frac{1}{2}$	$\frac{7}{8}$	8	315

Dimensions and weights are approximate

Ajax Steel Loading Chain

("Ajax" Reg. U. S. Pat. Off.)



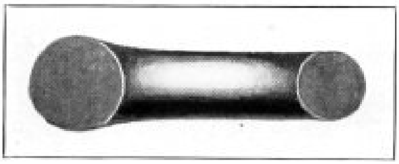
This chain is made from high-grade steel, very close link, with long-lap swelled weld. Only the most experienced chain-makers are employed in its manufacture. Each weld is carefully made, and the chain is inspected and tested to the loads shown in table on following page.

Ajax Steel Loading Chain is the highest grade of steel chain made for lumbering and oil-field purposes, and we guarantee it to pull stiff before breaking. Every pound will be replaced which does not meet this guarantee.

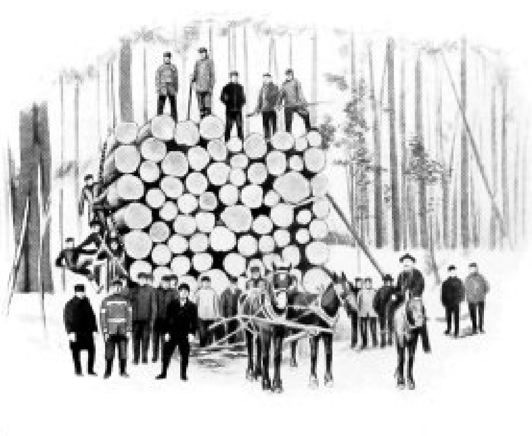
Sizes $\frac{7}{16}$-inch and smaller supplied Bright, larger sizes Blacked, unless otherwise specified.

Test certificate furnished when desired.

Sizes, dimensions, etc., on following page.



Cross section,
showing swelled weld.



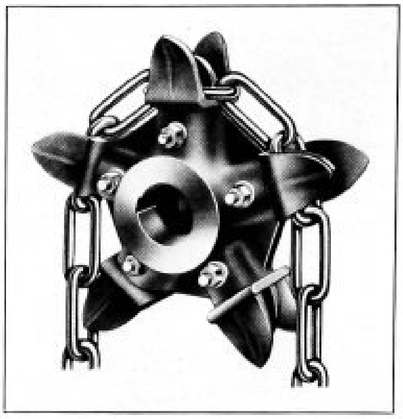
Ajax Steel Loading Chain

Trade Size in Inches	Size Material in Inches	Inside Length in Inches	Inside Width in Inches	Links per Foot	Weight per 100 Feet Pounds	Pull Stiff Under Test Pounds	Proof Test Pounds	Safe Working Load Pounds
$\frac{3}{16}$	$\frac{7}{32}$	$\frac{5}{8}$	$\frac{5}{16}$	$19\frac{1}{4}$	58	2,750	1,550	775
$\frac{7}{32}$	$\frac{8}{32}$	$\frac{11}{16}$	$\frac{3}{8}$	$17\frac{1}{2}$	65	3,450	1,950	975
$\frac{1}{4}$	$\frac{9}{32}$	$\frac{13}{16}$	$\frac{7}{16}$	$14\frac{3}{4}$	90	4,500	2,400	1,200
$\frac{9}{32}$	$\frac{10}{32}$	$\frac{7}{8}$	$\frac{1}{2}$	$13\frac{3}{4}$	110	5,600	2,950	1,475
$\frac{5}{16}$	$\frac{11}{32}$	$\frac{15}{16}$	$\frac{1}{2}$	$12\frac{3}{4}$	130	6,800	3,500	1,750
$\frac{11}{32}$	$\frac{12}{32}$	$1\frac{1}{16}$	$\frac{9}{16}$	$11\frac{1}{4}$	155	8,000	4,150	2,075
$\frac{3}{8}$	$\frac{13}{32}$	$1\frac{1}{8}$	$\frac{5}{8}$	$10\frac{3}{4}$	175	9,300	4,900	2,450
$\frac{7}{16}$	$\frac{15}{32}$	$1\frac{1}{4}$	$\frac{5}{8}$	$9\frac{1}{2}$	230	12,000	6,500	3,250
$\frac{1}{2}$	$\frac{17}{32}$	$1\frac{1}{2}$	$\frac{3}{4}$	8	290	15,000	8,500	4,250
$\frac{9}{16}$	$\frac{19}{32}$	$1\frac{1}{2}$	$\frac{13}{16}$	8	360	19,100	10,850	5,425
$\frac{5}{8}$	$\frac{21}{32}$	$1\frac{5}{8}$	$\frac{7}{8}$	$7\frac{1}{2}$	450	23,300	13,250	6,625
$\frac{3}{4}$	$\frac{25}{32}$	$1\frac{15}{16}$	$1\frac{1}{16}$	$6\frac{1}{4}$	650	33,700	19,150	9,575
$\frac{7}{8}$	$\frac{29}{32}$	$2\frac{1}{16}$	$1\frac{5}{16}$	$5\frac{3}{4}$	840	44,400	25,250	12,625
1	$\frac{33}{32}$	$2\frac{1}{2}$	$1\frac{1}{2}$	$4\frac{3}{4}$	1080	54,500	31,000	15,500

Dimensions and weights are approximate

Conveyor or Log Haul-Up Chain

Also known as Sprocket Wheel Chain



This chain is used in sawmills for conveying logs, slabs, sawdust, refuse, etc. Made in the following grades:

Proof—Same quality of material and workmanship as Proof Coil described on page 6.

BB—Same quality of material and workmanship as BB Coil described on page 8.

BBB—Same quality of material and workmanship as BBB Coil described on page 10.

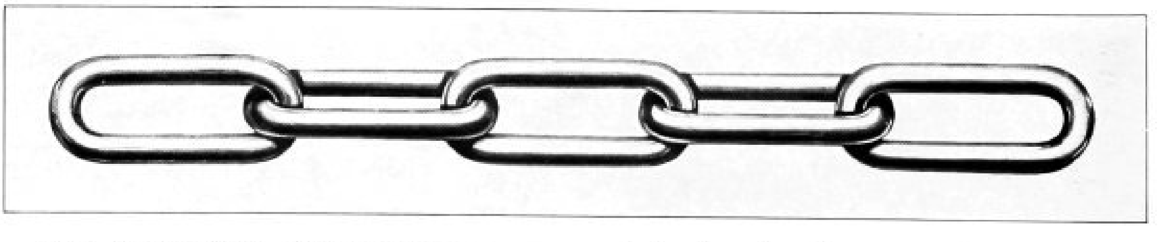
H. B. Iron—Same quality of material and workmanship as H. B. Dredge Chain described on page 20.

Ajax Iron—Same quality of material and workmanship as Ajax Dredge Chain described on page 22.

The inside length and width of each link is carefully gauged to insure accurate dimensions and the chains working perfectly on the sprocket.

When ordering Conveyor or Log Haul-Up Chain, it is necessary to give the inside width and the inside length of the link. On the following page we list standard sizes, but are prepared to furnish any special sizes required.

Furnished Blacked unless otherwise specified.

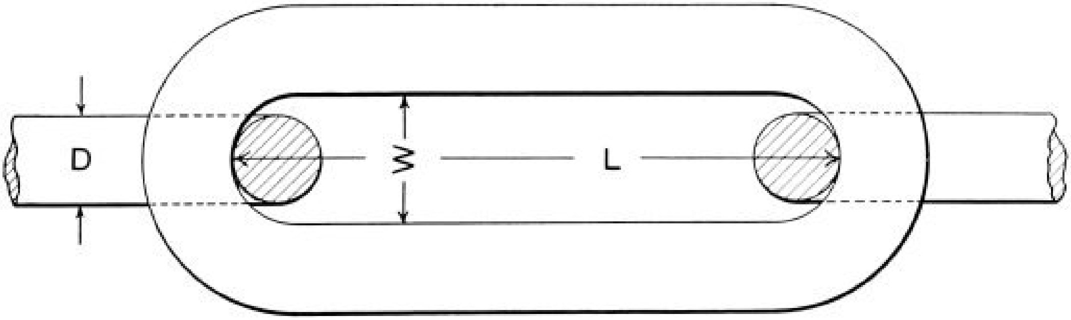


Note. It is desirable, when installing new conveyor chains, to replace the worn teeth on the sprocket wheel, so as to attain a maximum of service from the chain.

Conveyor or Log Haul-Up Chain

Trade Size, Inches *	Inside Width, Inches	Inside Length, Inches	Approximate Weight per 100 Feet	Trade Size, Inches *	Inside Width, Inches	Inside Length, Inches	Approximate Weight per 100 Feet
"D"	"W"	"L"	Pounds	"D"	"W"	"L"	Pounds
½	¾	3½	205	1	1⅝	6	785
½	⅞	3½	210	1	1¾	7	745
½	1	3½	215	1	1¾	8	720
⅝	1	4½	305	1	2	7	765
⅝	1	5	295	1	2	8	735
⅝	1⅛	5	300	1⅛	1½	6	1000
¾	1	5	420	1⅛	1¾	6	1025
¾	1⅛	5	430	1⅛	2	7	985
¾	1½	5	450	1⅛	2	8	940
¾	1⅛	6	400	1¼	2¼	7	1260
¾	1½	6	415	1¼	2¼	8	1205
⅞	1⅛	5	595	1⅜	2¼	8	1450
⅞	1½	5	625	1½	2	8	1700
⅞	1¼	6	570	1½	2¼	8	1750
⅞	1½	6	590	1⅝	2⅜	8	2120
⅞	1⅝	6	600	1¾	2⅛	8	2450
⅞	1¼	7	535	1¾	2¼	8	2485
⅞	2	8	630	1¾	2½	10	2300
1	1½	5	825	1⅞	2½	10	2700
1	1½	6	770	2	2½	10	3100

* Chain is furnished $\frac{1}{32}$-inch full.



"D" indicates	. .	Diameter, or Trade Size of material
"W" indicates	. . . .	Inside width of links
"L" indicates	. . . .	Inside length of links

Copies of the above cut, arranged so that sizes of special conveyor chain can be conveniently inserted, will be furnished on request.

Dredge or Heavy Duty Chain

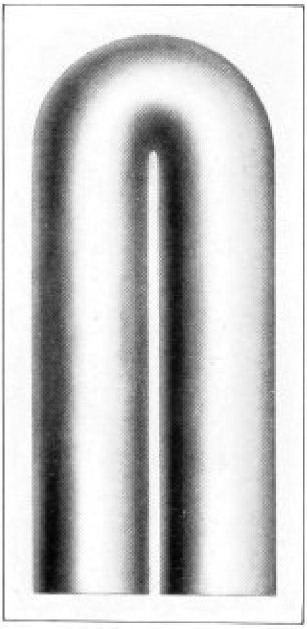


Illustration shows a typical cold bend of our Dredge Chain iron, bent through 180 degrees without fracture.

Extensive engineering operations in Industrial, Transportation and Allied Fields during the past quarter century have created a demand for a type of chain superior to any previously required, and possessing these essential qualities:

Hardness sufficient to withstand abrasion when used upon Dredges and Steam Shovels;

Ductility that will absorb shock loads when used upon wrecking units; and

Tensile Strength sufficient to carry—with the highest factor of safety—heavy loads imposed when employed with Cranes, Hoists, Slings, or for other severe and exacting usage where absolute

Dependability is required.

These requirements are met in "HB" and "Ajax" grades of Chain.

Chain is the bar formed into its distinctive shape to give flexibility, and the characteristics of the finished product depend to a great degree upon the component elements of the raw material. Uniform quality of material is imperative in the manufacture of Dredge or Heavy Duty Chain, and to obtain this essential element and guarantee freedom from splits,

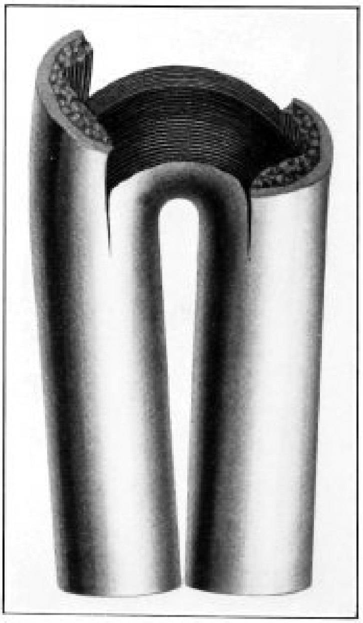


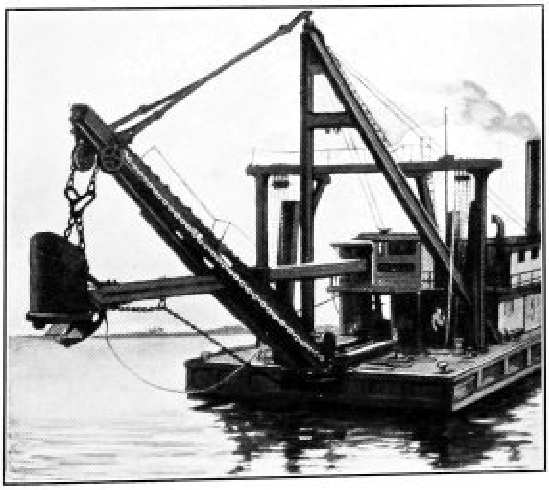
Illustration of nick and bend test, sample showing internal fibrous structure of our Dredge Chain iron.

seams, segregations and other local defects, all of the iron used in "HB" and "Ajax" grades of chain is rolled exclusively in our mills at Terre Haute, Indiana, and West Pullman, Illinois.

Proof Test: Experience has demonstrated that proof tests higher than those used by us, as shown in tables following each grade of chain, are detrimental, in that they depreciate the elasticity and shock-resisting qualities of the chain. Only under specific instruction — and then without our recommendation—will a higher proof test be given, which in all cases must be below the yield point of the material.

The manufacture of "HB" and "Ajax" Chain is under the supervision of trained metallurgists and chain experts from the raw material to the finished product. Break tests of both grades are made at frequent intervals at our plant, to insure that "Acco" standards are being maintained. A test certificate is furnished, applying to each shipment.

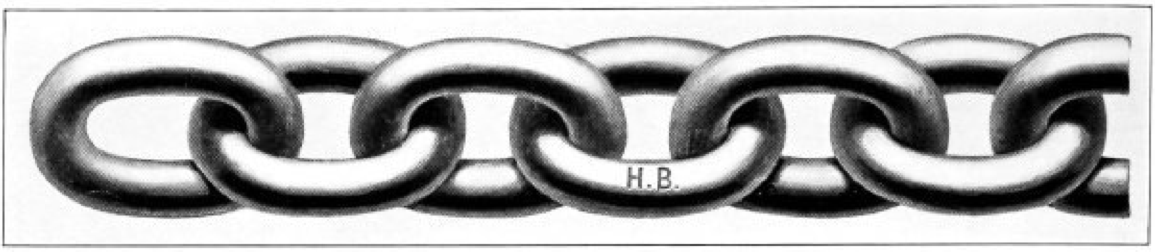
As the iron and the chain are both made in our mills under continuous rigid inspection, we will replace any chain showing defect in workmanship or material when the safe working load is not exceeded.



Our Dredge or Heavy Duty Chain is stamped every six feet "HB" or "Ajax" respectively, these symbols denoting dependability in quality and service.

"HB" and "Ajax" Chains are both exceptionally high grade products, but possess distinct differences in material and dimensions of links, as will be noted from the following comparative specifications.

Dredge or Heavy Duty Chain



H. B. Grade

("H. B." Reg. U. S. Pat. Off.)

Material: Fibrous wrought iron. Triple rolled from bushelled bars containing only refined iron.

Manufacture: The iron bars are formed into links and scarfed upon modern machines which insure uniformity of dimensions.

The scarfed links are welded into chain by experienced chain-makers who are thoroughly familiar with the proper welding temperature.

Each completed link is straightened in especially constructed dies to produce a straight-hanging chain.

After straightening, the chain is gauged so that each link will be of uniform proportions.

Inspection: Inspectors are in constant attendance to see that each manufacturing detail is carefully completed.

Proof Test: The finished chain is proof-tested in excess of its rated safe working load, and finally inspected before shipment.

Test Certificate: A certificate of test is furnished applying to each shipment.

Finish: Supplied Blacked unless otherwise ordered.

See paragraph 6, page 2, regarding care and replacement of Dredge Chain.

Table of sizes, dimensions, tests, etc., on following page.

Dredge or Heavy Duty Chain

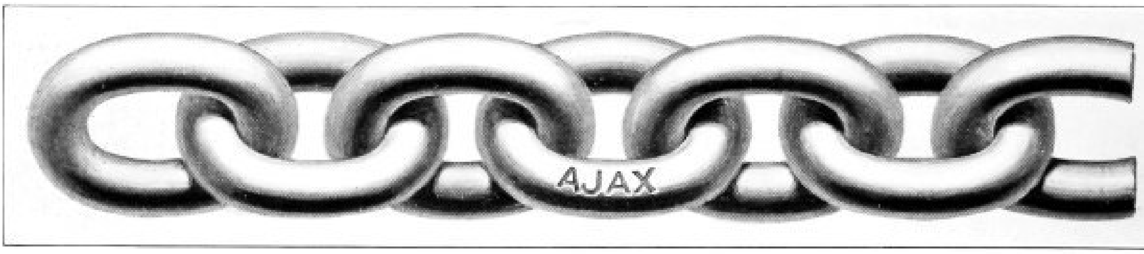
H. B. Grade

Trade Size In Inches	Size Material In Inches	Outside Length of Link In Inches	Outside Width of Link In Inches	Inside Length of Link In Inches	Inside Width of Link In Inches	Links per Foot	Weight per 100 Feet Pounds	Average Breaking Test Pounds	*Proof Test Pounds	Safe Working Load Pounds	Trade Size In Inches
3/8	13/32	1 7/8	1 3/8	1 1/16	9/16	11 3/8	167	9,000	2,970	2,700	3/8
7/16	15/32	2 1/8	1 9/16	1 3/16	5/8	10	214	11,500	3,800	3,450	7/16
1/2	17/32	2 3/8	1 3/4	1 5/16	11/16	9 1/8	280	15,000	4,950	4,500	1/2
9/16	19/32	2 5/8	2	1 7/16	13/16	8 3/8	355	18,600	6,140	5,580	9/16
5/8	21/32	2 29/32	2 1/4	1 19/32	15/16	7 1/2	440	23,100	7,620	6,930	5/8
11/16	23/32	3 1/8	2 3/8	1 11/16	15/16	7	535	28,500	9,400	8,550	11/16
3/4	25/32	3 1/2	2 5/8	1 15/16	1 1/16	6 1/4	625	33,800	11,160	10,140	3/4
13/16	27/32	3 3/4	2 13/16	2 1/16	1 1/8	5 3/4	720	40,800	13,480	12,240	13/16
7/8	29/32	3 15/16	3	2 1/8	1 3/16	5 5/8	830	46,700	15,400	14,000	7/8
15/16	31/32	4 3/16	3 3/16	2 1/4	1 1/4	5 3/8	950	55,000	18,150	16,500	15/16
1	1 1/32	4 9/16	3 5/16	2 1/2	1 1/4	4 3/4	1065	62,000	20,460	18,600	1
1 1/16	1 3/32	4 13/16	3 1/2	2 5/8	1 5/16	4 1/2	1200	70,500	23,270	21,150	1 1/16
1 1/8	1 5/32	5 1/16	3 11/16	2 3/4	1 3/8	4 3/8	1335	78,000	25,740	23,400	1 1/8
1 3/16	1 7/32	5 5/16	4	2 7/8	1 9/16	4 1/8	1480	88,000	29,040	26,400	1 3/16
1 1/4	1 9/32	5 9/16	4 5/16	3	1 3/4	4	1625	96,000	31,680	28,800	1 1/4
1 5/16	1 11/32	5 15/16	4 7/16	3 1/4	1 3/4	3 3/4	1790	106,000	34,980	31,800	1 5/16
1 3/8	1 13/32	6 5/16	4 5/8	3 1/2	1 13/16	3 1/2	1960	115,000	37,950	34,500	1 3/8
1 7/16	1 15/32	6 9/16	4 13/16	3 5/8	1 7/8	3 1/4	2140	125,400	41,360	37,600	1 7/16
1 1/2	1 17/32	6 15/16	4 15/16	3 7/8	1 7/8	3 1/8	2335	136,000	44,900	40,800	1 1/2
1 9/16	1 19/32	7 5/16	5 3/16	4 1/8	2	2 7/8	2580	145,000	47,900	43,500	1 9/16
1 5/8	1 21/32	7 9/16	5 7/16	4 1/4	2 1/8	2 3/4	2740	155,000	51,200	46,500	1 5/8
1 3/4	1 25/32	8 5/16	5 13/16	4 3/4	2 1/4	2 1/2	3180	175,000	57,800	52,500	1 3/4
1 7/8	1 29/32	9 1/16	6 5/16	5 1/4	2 1/2	2 1/4	3650	195,000	64,400	58,500	1 7/8
2	2 1/32	9 13/16	6 11/16	5 3/4	2 5/8	2 1/8	4100	222,000	73,300	66,600	2
2 1/8	2 5/32	10 9/16	7 1/16	6 1/4	2 3/4	2	4560	250,000	82,500	75,000	2 1/8
2 1/4	2 9/32	11 5/16	7 9/16	6 3/4	3	1 7/8	4990	282,000	93,100	84,600	2 1/4
2 3/8	2 13/32	11 11/16	7 15/16	6 7/8	3 1/8	1 3/4	5580	313,000	103,300	93,900	2 3/8
2 1/2	2 17/32	12 1/16	8 5/16	7	3 1/4	1 11/16	6200	348,000	115,000	104,400	2 1/2

*H. B. Dredge Chain is proof-tested to the loads shown in this column. The tests are sufficiently high to insure the capacity of the chain for the safe working loads shown, and at the same time will not deform the links or affect the elastic qualities of the chain.

Dimensions and weights are approximate

Dredge or Heavy Duty Chain



Ajax Grade

("Ajax" Reg. U. S. Pat. Off.)

Material: Fibrous triple-rolled wrought iron made from a combination of selected puddled pig iron and bushelled bars.

Rolled from 1-inch square billets, puddled iron and bushelled bar billets alternating.

The billets in this checkerboard pile are of equal length, no short billets being used.

Manufacture: Formed and scarfed the same as "H. B." Grade.

Welded only by chain-makers who have shown marked proficiency.

The links are formed as short as practicable, making the Ajax Grade more flexible for use around sharp corners, over sheave wheels, etc.

Closer links and the ductile puddled iron make Ajax Grade especially adaptable for use where subjected to shock loads.

Each link is straightened and gauged before testing, to insure perfect alignment.

Inspection: Inspectors of experience and ability supervise every manufacturing operation.

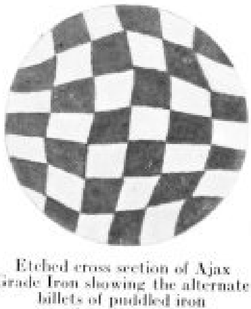
Proof Test: The finished chain is subjected to a proof load sufficiently high to insure it for the rated safe working load shown in the table on the following page.

Test Certificate: A certificate of test is furnished, applying to each shipment.

Finish: Supplied Blacked unless otherwise ordered.

See paragraph 6, page 2, regarding care and replacement of Dredge Chain.

Table of sizes, dimensions, tests, etc., on following page.



Etched cross section of Ajax Grade Iron showing the alternate billets of puddled iron and bushelled bar.

Dredge or Heavy Duty Chain

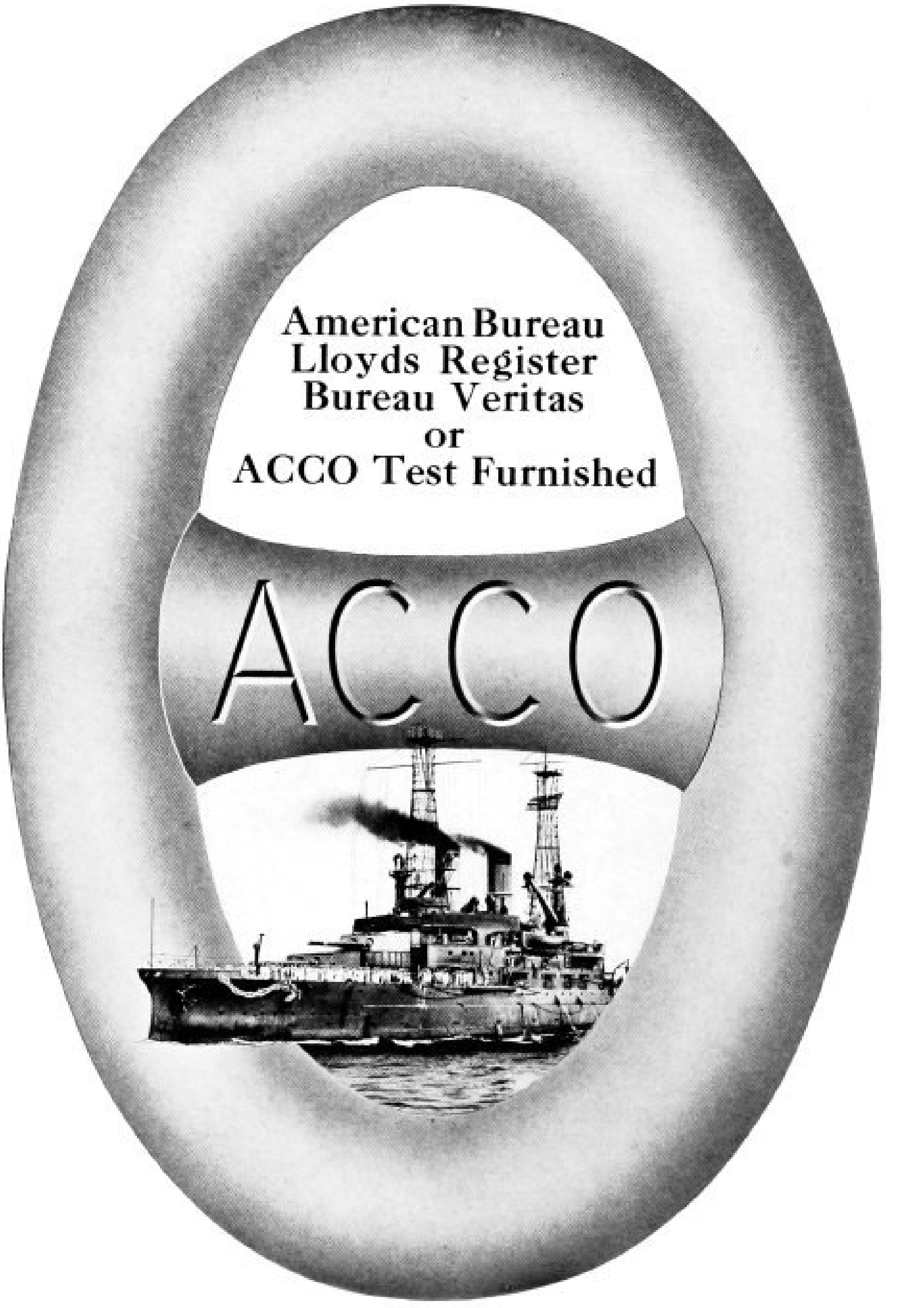
Ajax Grade

Trade Size In Inches	Size Material In Inches	Outside Length of Link In Inches	Outside Width of Link In Inches	Inside Length of Link In Inches	Inside Width of Link In Inches	Links per Foot	Weight per 100 Feet Pounds	Average Breaking Test Pounds	*Proof Test Pounds	Safe Working Load Pounds	Trade Size In Inches
3/8	13/32	1 13/16	1 3/8	1	9/16	12	175	9,000	3,420	2,970	3/8
7/16	15/32	2 1/16	1 9/16	1 1/8	5/8	10 5/8	230	11,500	4,370	3,800	7/16
1/2	17/32	2 1/4	1 3/4	1 3/16	11/16	10	295	15,000	5,690	4,950	1/2
9/16	19/32	2 9/16	2	1 3/8	13/16	8 3/4	370	18,600	7,060	6,140	9/16
5/8	21/32	2 3/4	2 1/4	1 7/16	15/16	8 3/8	470	23,100	8,760	7,620	5/8
11/16	23/32	3	2 3/8	1 9/16	15/16	7 5/8	565	28,500	10,800	9,400	11/16
3/4	25/32	3 3/8	2 5/8	1 13/16	1 1/16	6 5/8	650	33,800	12,830	11,160	3/4
13/16	27/32	3 5/8	2 13/16	1 15/16	1 1/8	6 1/4	775	40,800	15,500	13,480	13/16
7/8	29/32	3 13/16	3	2	1 3/16	6	880	46,700	17,700	15,400	7/8
1	1 1/32	4 7/16	3 5/16	2 3/8	1 1/4	5	1130	62,000	23,550	20,460	1
1 1/8	1 5/32	4 15/16	3 11/16	2 5/8	1 3/8	4 5/8	1420	78,000	29,600	25,740	1 1/8
1 1/4	1 9/32	5 1/2	4 5/16	2 15/16	1 3/4	4 1/8	1745	96,000	36,400	31,680	1 1/4
1 3/8	1 13/32	6 1/16	4 5/8	3 1/4	1 13/16	3 5/8	2100	115,000	43,600	37,950	1 3/8
1 1/2	1 17/32	6 1/2	4 15/16	3 7/16	1 7/8	3 1/2	2500	136,000	51,600	44,900	1 1/2
1 5/8	1 21/32	7 1/8	5 7/16	3 13/16	2 1/8	3 1/8	2950	155,000	58,900	51,200	1 5/8
1 3/4	1 25/32	7 1/2	5 13/16	3 15/16	2 1/4	3	3400	175,000	66,500	57,800	1 3/4
1 7/8	1 29/32	8 3/8	6 5/16	4 9/16	2 1/2	2 5/8	3900	195,000	74,000	64,400	1 7/8
2	2 1/32	9	6 11/16	4 15/16	2 5/8	2 7/16	4400	222,000	84,300	73,300	2
2 1/8	2 5/32	9 1/2	7 1/16	5 3/16	2 3/4	2 5/16	4950	250,000	94,900	82,500	2 1/8
2 1/4	2 9/32	10	7 9/16	5 7/16	3	2 3/16	5550	282,000	107,000	93,100	2 1/4
2 3/8	2 13/32	10 1/2	7 15/16	5 11/16	3 1/8	2 1/8	6100	313,000	119,000	103,300	2 3/8
2 1/2	2 17/32	11	8 5/16	5 15/16	3 1/4	2	6700	348,000	132,300	115,000	2 1/2

*Ajax Dredge Chain is proof-tested to the loads shown in this column. The tests are sufficiently high to insure the capacity of the chain for the safe working loads shown, and at the same time will not deform the links or affect the elastic qualities of the chain.

Dimensions and weights are approximate

Stud Link Anchor Chain



American Bureau
Lloyds Register
Bureau Veritas
or
ACCO Test Furnished

Stud Link Anchor Chain

ALL our Stud Link Chain is made from high-grade iron produced in our rolling mills. Our many years of experience in manufacturing chain iron insures an even quality throughout.

American Bureau of Shipping

On the following pages we list specifications for Stud Link Chain made to the standards of the American Bureau of Shipping, approved June, 1918. All chains so ordered are furnished with test and inspection certificate by the American Bureau of Shipping.

Lloyd's Register of Shipping

English Practice: We also list sizes and specifications to Lloyd's (English) Standards, approved April, 1915. We are prepared to furnish Stud Link Chain in all sizes to these specifications, and will furnish Lloyd's test and inspection certificates with chain so ordered.

American Practice: Lloyd's American Practice Stud Link Chain conforms to the dimensional requirements of the American Bureau of Shipping, but is subjected to Lloyd's test and inspection.

Bureau Veritas

Stud Link Chain, tested to Bureau Veritas requirements, can be furnished.

Acco Test and Inspection

Stud Link Chain subject to our test and inspection is made to the same specifications as that of the American Bureau of Shipping. The same grade of material is used and the tests are identically the same, the only differences being that we conduct the test and issue our certificate.

Chains made to special dimensions or old standards can also be supplied.

Dimensions, Weights and Tests of Stud Link Anchor Chain

As Approved by American Bureau of Shipping, June, 1918

Also Specifications of Stud Link Anchor Chain made to Acco Test and Inspection

Common Links				Enlarged Links			Short End Links			Long End Links			Approximate Weight per 15 Fathoms in Pounds	Actual Proof Test in Pounds	Breaking Test in Pounds
Size of Chain in Inches	Approved Length Outside in Inches	Approved Width Outside in Inches	Length of Six Links Over All in Inches	Size of Material in Inches	Approved Length Outside in Inches	Approved Width Outside in Inches	Size of Material in Inches	Approved Length Outside in Inches	Approved Width Outside in Inches	Size of Material in Inches	Approved Length Outside in Inches	Approved Width Outside in Inches			
⅝	3¾	2 3/16	16¼	11/16	4	2⅜	¾	4 1/16	2½	¾	4 11/16	2½	365	15,680	23,560
11/16	4⅛	2 7/16	17⅞	¾	4⅜	2⅝	13/16	4 7/16	2¾	13/16	5 3/16	2¾	405	19,040	28,560
¾	4½	2⅝	19½	13/16	4¾	2 13/16	15/16	4⅞	3	15/16	5⅝	3	480	22,680	33,880
13/16	4⅞	2⅞	21⅛	⅞	5 3/16	3 1/16	1	5¼	3¼	1	6⅛	3¼	570	26,600	39,872
⅞	5¼	3⅛	22¾	15/16	5 9/16	3 5/16	1 1/16	5 11/16	3½	1 1/16	6 9/16	3½	655	30,800	46,200
15/16	5⅝	3 5/16	24⅜	1	6	3 9/16	1⅛	6⅛	3¾	1⅛	7 1/16	3¾	755	35,392	53,088
1	6	3 9/16	26	1 1/16	6⅜	3¾	1 3/16	6½	4	1 3/16	7 9/16	4	855	40,320	60,480
1 1/16	6⅜	3¾	27⅝	1⅛	6¾	4	1¼	6 15/16	4¼	1¼	8	4¼	970	45,472	68,096
1⅛	6¾	4	29¼	1 3/16	7 3/16	4¼	1 5/16	7 5/16	4½	1 5/16	8½	4½	1,085	50,960	76,440
1 3/16	7⅛	4¼	30⅞	1¼	7 9/16	4½	1 7/16	7¾	4¾	1 7/16	8 15/16	4¾	1,215	56,840	85,120
1¼	7½	4½	32½	1 5/16	7 15/16	4¾	1½	8⅛	5	1½	9 7/16	5	1,345	63,000	94,360
1 5/16	7⅞	4¾	34⅛	1⅜	8⅜	4 15/16	1 9/16	8½	5¼	1 9/16	9⅞	5¼	1,485	69,440	104,160
1⅜	8¼	4 15/16	35¾	1 7/16	8¾	5 3/16	1⅝	8 15/16	5½	1⅝	10⅜	5½	1,625	76,120	114,240
1 7/16	8⅝	5 3/16	37⅜	1½	9 3/16	5 7/16	1 11/16	9⅜	5¾	1 11/16	10⅞	5¾	1,775	83,160	124,600
1½	9	5⅜	39	1 9/16	9 9/16	5 11/16	1 13/16	9 13/16	6	1 13/16	11 5/16	6	1,935	90,720	131,488
1 9/16	9⅜	5⅝	40⅝	1 11/16	9 15/16	5⅞	1⅞	10 3/16	6¼	1⅞	11¾	6¼	2,090	98,336	137,536
1⅝	9¾	5⅞	42¼	1¾	10⅜	6⅛	1 15/16	10 9/16	6½	1 15/16	12¼	6½	2,235	106,400	148,960
1 11/16	10⅛	6 1/16	43⅞	1 13/16	10¾	6⅜	2	11	6¾	2	12¾	6¾	2,410	114,800	160,720
1¾	10½	6 5/16	45½	1⅞	11⅛	6⅝	2 1/16	11⅜	7	2 1/16	13 3/16	7	2,590	123,480	172,760
1 13/16	10⅞	6½	47⅛	1 15/16	11 9/16	6⅞	2 3/16	11 13/16	7¼	2 3/16	13 11/16	7¼	2,785	132,440	185,360
1⅞	11¼	6¾	48¾	2	11 15/16	7 1/16	2¼	12¼	7½	2¼	14⅛	7½	2,975	141,680	198,240
1 15/16	11⅝	7	50⅜	2 1/16	12⅜	7 5/16	2 5/16	12⅝	7¾	2 5/16	14⅝	7¾	3,175	151,200	211,680
2	12	7 3/16	52	2⅛	12¾	7 9/16	2⅜	13 1/16	8	2⅜	15 1/16	8	3,355	161,280	225,792
2 1/16	12⅜	7 7/16	53⅝	2 3/16	13⅛	7 13/16	2 7/16	13 7/16	8¼	2 7/16	15 9/16	8¼	3,570	171,360	239,904
2⅛	12¾	7⅝	55¼	2¼	13½	8	2½	13⅞	8½	2½	16	8½	3,785	182,000	254,800
2 3/16	13⅛	7⅞	56⅞	2 5/16	13 15/16	8¼	2 9/16	14¼	8¾	2 9/16	16½	8¾	4,015	192,920	269,920

Dimensions, Weights and Tests of Stud Link Anchor Chain

(Continued)

Common Links				Enlarged Links			Short End Links			Long End Links			Approximate Weight per 15 Fathoms in Pounds	Actual Proof Test in Pounds	Breaking Test in Pounds
Size of Chain in Inches	Approved Length Outside in Inches	Approved Width Outside in Inches	Length of Six Links Over All in Inches	Size of Material in Inches	Approved Length Outside in Inches	Approved Width Outside in Inches	Size of Material in Inches	Approved Length Outside in Inches	Approved Width Outside in Inches	Size of Material in Inches	Approved Length Outside in Inches	Approved Width Outside in Inches			
2¼	13½	8⅛	58½	2⅜	14⅜	8½	2 11/16	14 11/16	9	2 11/16	16 15/16	9	4,245	204,120	285,600
2 5/16	13⅞	8 5/16	60⅛	2 7/16	14¾	8¾	2¾	15 1/16	9¼	2¾	17 7/16	9¼	4,485	215,600	301,840
2⅜	14¼	8 9/16	61¾	2½	15 3/16	9	2 13/16	15½	9½	2 13/16	17⅞	9½	4,725	227,360	318,304
2 7/16	14⅝	8¾	63⅜	2 9/16	15 9/16	9 3/16	2⅞	15⅞	9¾	2⅞	18⅜	9¾	4,960	239,456	335,160
2½	15	9	65	2⅝	15 15/16	9 7/16	3	16¼	10	3	18⅞	10	5,265	252,000	352,800
2 9/16	15⅜	9¼	66⅝	2¾	16 5/16	9 11/16	3 1/16	16¾	10¼	3 1/16	19 5/16	10¼	5,535	261,408	365,960
2⅝	15¾	9 7/16	68¼	2 13/16	16¾	9 15/16	3⅛	17⅛	10½	3⅛	19¾	10½	5,815	270,816	379,120
2 11/16	16⅛	9 11/16	69⅞	2⅞	17⅛	10⅛	3 3/16	17 9/16	10¾	3 3/16	20¼	10¾	6,105	280,224	392,280
2¾	16½	9⅞	71½	2 15/16	17 9/16	10⅜	3¼	17 15/16	11	3¼	20¾	11	6,405	289,632	405,440
2 13/16	16⅞	10⅛	73⅛	3	17 15/16	10⅝	3⅜	18 5/16	11¼	3⅜	21 3/16	11¼	6,705	298,816	418,320
2⅞	17¼	10⅜	74¾	3 1/16	18 5/16	10⅞	3 7/16	18¾	11½	3 7/16	21 11/16	11½	7,015	308,224	431,480
2 15/16	17⅝	10 9/16	76⅜	3⅛	18¾	11⅛	3½	19⅛	11¾	3½	22⅛	11¾	7,330	317,408	444,360
3	18	10 13/16	78	3 3/16	19⅛	11⅜	3 9/16	19 9/16	12	3 9/16	22⅝	12	7,650	326,592	457,184
3 1/16	18⅜	11	79⅝	3¼	19½	11 9/16	3⅝	19 15/16	12¼	3⅝	23 1/16	12¼	7,980	335,552	469,728
3⅛	18¾	11¼	81¼	3 5/16	19 15/16	11 13/16	3 11/16	20 7/16	12½	3 11/16	23 9/16	12½	8,320	344,400	482,160
3 3/16	19⅛	11½	82⅞	3⅜	20 5/16	12 1/16	3 13/16	20 13/16	12¾	3 13/16	24	12¾	8,660	353,248	494,480
3¼	19½	11 11/16	84½	3 7/16	20¾	12¼	3⅞	21 3/16	13	3⅞	24½	13	9,010	361,984	506,688
3 5/16	19⅞	11 15/16	86⅛	3½	21⅛	12½	3 15/16	21⅝	13¼	3 15/16	24 15/16	13¼	9,360	370,496	518,560
3⅜	20¼	12⅛	87¾	3 9/16	21½	12¾	4	22	13½	4	25 7/16	13½	9,725	378,840	530,320
3 7/16	20⅝	12⅜	89⅜	3⅝	21 15/16	13	4 1/16	22 7/16	13¾	4 1/16	25 15/16	13¾	10,095	386,960	541,632
3½	21	12⅝	91	3¾	22 5/16	13¼	4 3/16	22 13/16	14	4 3/16	26⅜	14	10,475	395,136	553,056
3¾	22½	13½	97½	4	23⅞	14 3/16	4 7/16	24½	15	4 7/16	28¼	15	12,025	425,370	588,320

Furnished regularly in 15-fathom shots, with or without Joining and Anchor Shackles, as ordered. If Shackles are required, orders should clearly specify the style as well as the exact number wanted with each shot or length of chain. Regularly supplied Blacked.

Joining and Anchor Shackles listed on pages 30 and 31.

Dimensions, Weights and Tests of Stud Link Anchor Chain

As Approved by Lloyd's Register of Shipping, April, 1915

	Common Links			Enlarged Links			End Links					
Size of Chain in Inches	Approved Length Outside in Inches	Approved Width Outside in Inches	Length of Six Links Over All in Inches	Size of Material in Inches	Approved Length Outside in Inches	Approved Width Outside in Inches	Size of Material in Inches	Approved Length Outside in Inches	Approved Width Outside in Inches	Approximate Weight per Fathom in Pounds*	Actual Proof Test in Pounds	Approximate Breaking Test in Pounds
⅝	3¾	2¼	16¼	11/16	4 1/16	2½	¾	4 1/16	2½	24	15,680	23,520
11/16	4⅛	2 15/32	17⅞	¾	4 15/32	2¾	27/32	4 15/32	2¾	27	19,040	28,560
¾	4½	2 11/16	19½	27/32	4⅞	3	29/32	4⅞	3	32	22,680	33,880
13/16	4⅞	2 15/16	21⅛	⅞	5 9/32	3¼	31/32	5 9/32	3¼	38	26,600	39,872
⅞	5¼	3 5/32	22¾	31/32	5 11/16	3½	1 1/16	5 11/16	3½	43	30,800	46,200
15/16	5⅝	3⅜	24⅜	1 1/32	6 3/32	3¾	1⅛	6 3/32	3¾	50	35,392	53,088
1	6	3 19/32	26	1 3/32	6½	4	1 3/16	6½	4	57	40,320	60,480
1 1/16	6⅜	3 27/32	27⅝	1 5/32	6 29/32	4¼	1 9/32	6 29/32	4¼	65	45,472	68,096
1⅛	6¾	4 1/16	29¼	1¼	7 5/16	4½	1 11/32	7 5/16	4½	73	50,960	76,440
1 3/16	7⅛	4 9/32	30⅞	1 5/16	7 23/32	4¾	1 7/16	7 23/32	4¾	81	56,840	85,120
1¼	7½	4½	32½	1⅜	8⅛	5	1½	8⅛	5	90	63,000	94,360
1 5/16	7⅞	4 23/32	34⅛	1 7/16	8 17/32	5¼	1 19/32	8 17/32	5¼	99	69,440	104,160
1⅜	8¼	4 15/16	35¾	1½	8 15/16	5½	1 21/32	8 15/16	5½	108	76,160	114,240
1 7/16	8⅝	5 3/16	37⅜	1 19/32	9 11/32	5¾	1 23/32	9 11/32	5¾	119	83,160	124,600
1½	9	5 13/32	39	1 21/32	9¾	6	1 13/16	9¾	6	129	90,720	131,488
1 9/16	9⅜	5⅝	40⅝	1 23/32	10 5/32	6¼	1⅞	10 5/32	6¼	139	98,336	137,536
1⅝	9¾	5 27/32	42¼	1 25/32	10 9/16	6½	1 15/16	10 9/16	6½	149	106,400	148,960
1 11/16	10⅛	6 3/32	43⅞	1⅞	10 31/32	6¾	2 1/32	10 31/32	6¾	161	114,800	160,720
1¾	10½	6 5/16	45½	1 15/16	11⅜	7	2 3/32	11⅜	7	172	123,480	172,760
1 13/16	10⅞	6 17/32	47⅛	2	11 25/32	7¼	2 3/16	11 25/32	7¼	186	132,440	185,360
1⅞	11¼	6¾	48¾	2 1/16	12 3/16	7½	2¼	12 3/16	7½	199	141,680	198,240
1 15/16	11⅝	6 31/32	50⅜	2⅛	12 19/32	7¾	2 11/32	12 19/32	7¾	212	151,200	211,680
2	12	7 3/16	52	2 3/16	13	8	2 13/32	13	8	223	161,280	225,792

Dimensions, Weights and Tests of Stud Link Anchor Chain

(Continued)

	Common Links			Enlarged Links			End Links					
Size of Chain in Inches	Approved Length Outside in Inches	Approved Width Outside in Inches	Length of Six Links Over All in Inches	Size of Material in Inches	Approved Length Outside in Inches	Approved Width Outside in Inches	Size of Material in Inches	Approved Length Outside in Inches	Approved Width Outside in Inches	Approximate Weight per Fathom in Pounds*	Actual Proof Test in Pounds	Approximate Breaking Test in Pounds
2 1/16	12⅜	7 7/16	53⅝	2 9/32	13 13/32	8¼	2 15/32	13 13/32	8¼	238	171,360	239,904
2⅛	12¾	7 21/32	55¼	2 11/32	13 13/16	8½	2 9/16	13 13/16	8½	252	182,000	254,800
2 3/16	13⅛	7⅞	56⅞	2 13/32	14 7/32	8¾	2⅝	14 7/32	8¾	268	192,920	269,920
2¼	13½	8 3/32	58½	2 15/32	14⅝	9	2 11/16	14⅝	9	283	204,120	285,600
2 5/16	13⅞	8 11/32	60⅛	2 17/32	15 1/32	9¼	2 25/32	15 1/32	9¼	299	215,600	301,840
2⅜	14¼	8 9/16	61¾	2⅝	15 7/16	9½	2 27/32	15 7/16	9½	315	227,360	318,304
2 7/16	14⅝	8 25/32	63⅜	2 11/16	15 27/32	9¾	2 15/16	15 27/32	9¾	332	239,456	335,160
2½	15	9	65	2¾	16¼	10	3	16¼	10	353	252,000	352,800
2 9/16	15⅜	9 7/32	66⅝	2 13/16	16 21/32	10¼	3 1/16	16 21/32	10¼	369	261,408	365,960
2⅝	15¾	9 7/16	68¼	2⅞	17 1/16	10½	3 5/32	17 1/16	10½	388	270,816	379,120
2 11/16	16⅛	9 11/16	69⅞	2 31/32	17 15/32	10¾	3 7/32	17 15/32	10¾	407	280,224	392,280
2¾	16½	9 29/32	71½	3 1/32	17⅞	11	3 5/16	17⅞	11	427	289,632	405,440
2 13/16	16⅞	10⅛	73⅛	3 3/32	18 9/32	11¼	3⅜	18 9/32	11¼	447	298,816	418,320
2⅞	17¼	10 11/32	74¾	3 5/32	18 11/16	11½	3 7/16	18 11/16	11½	468	308,224	431,480
2 15/16	17⅝	10 19/32	76⅜	3 7/32	19 3/32	11¾	3 17/32	19 3/32	11¾	489	317,408	444,360
3	18	10 13/16	78	3 5/16	19½	12	3 19/32	19½	12	510	326,592	457,184

*This weight does not include shackles.

Furnished regularly in 15-fathom shots, with or without Joining and Anchor Shackles, as ordered. If Shackles are required, orders should clearly specify the style as well as the exact number wanted with each shot or length of chain. Regularly supplied Blacked.

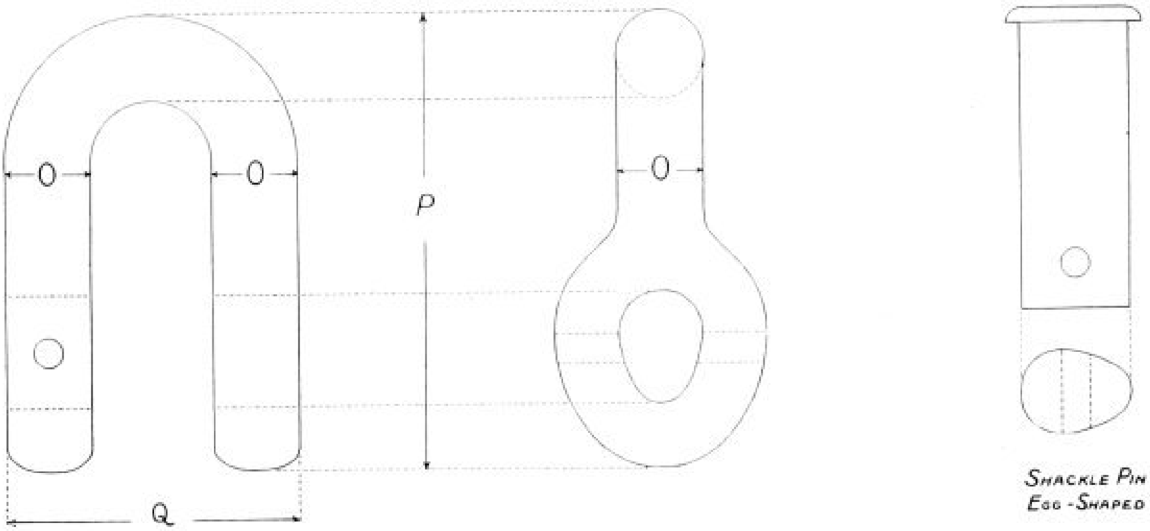
Joining and Anchor Shackles listed on pages 32 and 33.

Joining and Anchor Shackles

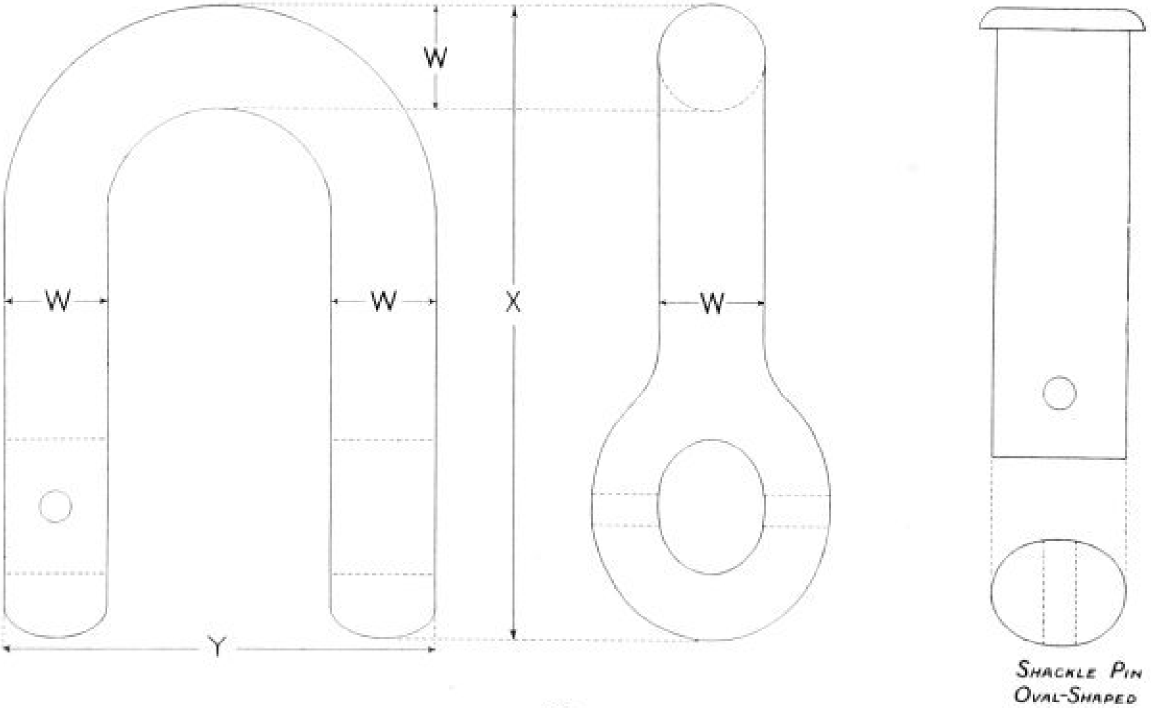
To American Bureau of Shipping Specifications

Also used on Stud Link Anchor Chain made to Acco Test and Inspection

JOINING SHACKLE — "D"



END OR ANCHOR SHACKLE — "F"



Dimensions and Weights of Shackles

Approved by American Bureau of Shipping, June, 1918

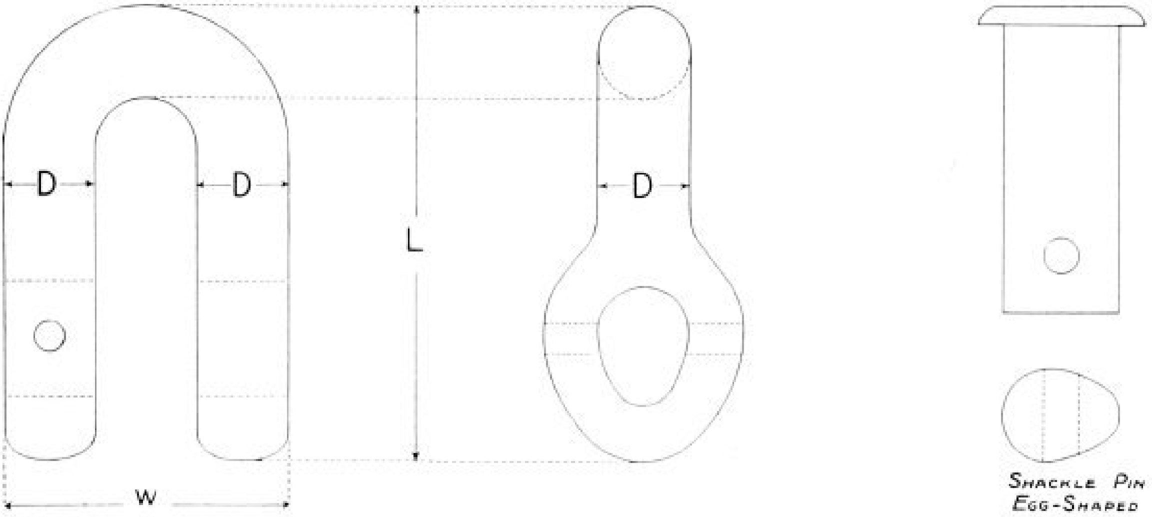
Also Specifications of Shackles to Acco Test and Inspection

Size of Chain on Which Used in Inches	Joining Shackles "D"				End or Anchor Shackles "F"			
	"O" Diameter of Material in Inches	"P" Length of Shackle Outside in Inches	"Q" Width of Shackle Outside in Inches	Approximate Weight Including Pin in Pounds	"W" Diameter of Material in Inches	"X" Length of Shackle Outside in Inches	"Y" Width of Shackle Outside in Inches	Approximate Weight Including Pin in Pounds
5/8	3/4	4 1/16	2 1/2	2	7/8	5 1/2	3 3/4	5
11/16	13/16	4 7/16	2 3/4	3	1	6	4 1/4	7
3/4	15/16	4 7/8	3	3 3/4	1 1/16	6 5/8	4 1/2	8
13/16	1	5 1/4	3 1/4	4 3/4	1 1/8	7 1/8	4 3/4	10
7/8	1 1/16	5 11/16	3 1/2	5 1/2	1 3/16	7 3/4	5 1/8	11
15/16	1 1/8	6 1/16	3 3/4	8	1 5/16	8 1/4	5 5/8	13
1	1 3/16	6 1/2	4	8 1/2	1 7/16	8 3/4	6	16
1 1/16	1 1/4	6 7/8	4 1/4	9 1/2	1 1/2	9 3/8	6 3/8	20
1 1/8	1 5/16	7 5/16	4 1/2	11	1 9/16	9 7/8	6 5/8	22
1 3/16	1 7/16	7 11/16	4 3/4	15	1 5/8	10 1/2	6 7/8	24
1 1/4	1 1/2	8 1/8	5	17	1 3/4	11	7 1/4	29
1 5/16	1 9/16	8 1/2	5 1/4	18	1 7/8	11 1/2	7 5/8	32
1 3/8	1 5/8	8 15/16	5 1/2	20	1 15/16	12 1/8	7 7/8	39
1 7/16	1 11/16	9 5/16	5 3/4	21	2	12 5/8	8 1/8	43
1 1/2	1 13/16	9 11/16	6	28	2 1/8	13 1/4	8 1/2	46
1 9/16	1 7/8	10 1/8	6 1/4	31	2 3/16	13 3/4	8 3/4	50
1 5/8	1 15/16	10 1/2	6 1/2	34	2 1/4	14 1/4	9	54
1 11/16	2	10 15/16	6 3/4	41	2 3/8	14 7/8	9 3/8	69
1 3/4	2 1/16	11 5/16	7	42	2 7/16	15 3/8	9 5/8	73
1 13/16	2 3/16	11 3/4	7 1/4	46	2 1/2	16	9 7/8	84
1 7/8	2 1/4	12 1/8	7 1/2	48	2 5/8	16 1/2	10 1/4	98
1 15/16	2 5/16	12 9/16	7 3/4	53	2 3/4	17	10 3/4	107
2	2 3/8	12 15/16	8	62	2 13/16	17 5/8	11 1/8	122
2 1/16	2 7/16	13 3/8	8 1/4	70	2 7/8	18 1/8	11 1/2	124
2 1/8	2 1/2	13 3/4	8 1/2	74	3	18 3/4	12	140
2 3/16	2 9/16	14 3/16	8 3/4	77	3 1/16	19 1/4	12 3/8	149
2 1/4	2 11/16	14 9/16	9	87	3 1/8	19 3/4	12 3/4	162
2 5/16	2 3/4	14 15/16	9 1/4	90	3 1/4	20 3/8	13 1/4	173
2 3/8	2 13/16	15 3/8	9 1/2	101	3 3/8	21	13 3/4	188
2 7/16	2 7/8	15 3/4	9 3/4	114	3 7/16	21 1/2	14 1/8	193
2 1/2	3	16 3/16	10	125	3 1/2	22	14 1/2	220
2 9/16	3 1/16	16 9/16	10 1/4	130	3 5/8	22 1/2	15	251
2 5/8	3 1/8	17	10 1/2	136	3 11/16	23 1/8	15 3/8	266
2 11/16	3 3/16	17 3/8	10 3/4	144	3 3/4	23 5/8	15 3/4	291
2 3/4	3 1/4	17 13/16	11	154	3 7/8	24 1/4	16 1/4	321
2 13/16	3 3/8	18 3/16	11 1/4	171	3 15/16	24 3/4	16 5/8	333
2 7/8	3 7/16	18 5/8	11 1/2	182	4	25 1/4	17	360
2 15/16	3 1/2	19	11 3/4	194	4 1/8	25 7/8	17 1/2	386
3	3 9/16	19 7/16	12	206	4 3/16	26 3/8	17 7/8	404
3 1/16	3 5/8	19 13/16	12 1/4	220	4 1/4	27	18 1/4	423
3 1/8	3 11/16	20 1/4	12 1/2	231	4 3/8	27 1/2	18 5/8	461
3 3/16	3 13/16	20 5/8	12 3/4	245	4 1/2	28	19 1/8	501
3 1/4	3 7/8	21	13	257	4 9/16	28 5/8	19 1/2	524
3 5/16	3 15/16	21 7/16	13 1/4	268	4 5/8	29 1/4	20	542
3 3/8	4	21 13/16	13 1/2	278	4 11/16	29 3/4	20 3/8	564
3 7/16	4 1/16	22 1/4	13 3/4	289	4 13/16	30 1/4	20 3/4	611
3 1/2	4 3/16	22 5/8	14	308	4 15/16	30 3/4	21 1/4	661
3 3/4	4 7/16	24 1/4	15	368	5 1/4	33	23	799

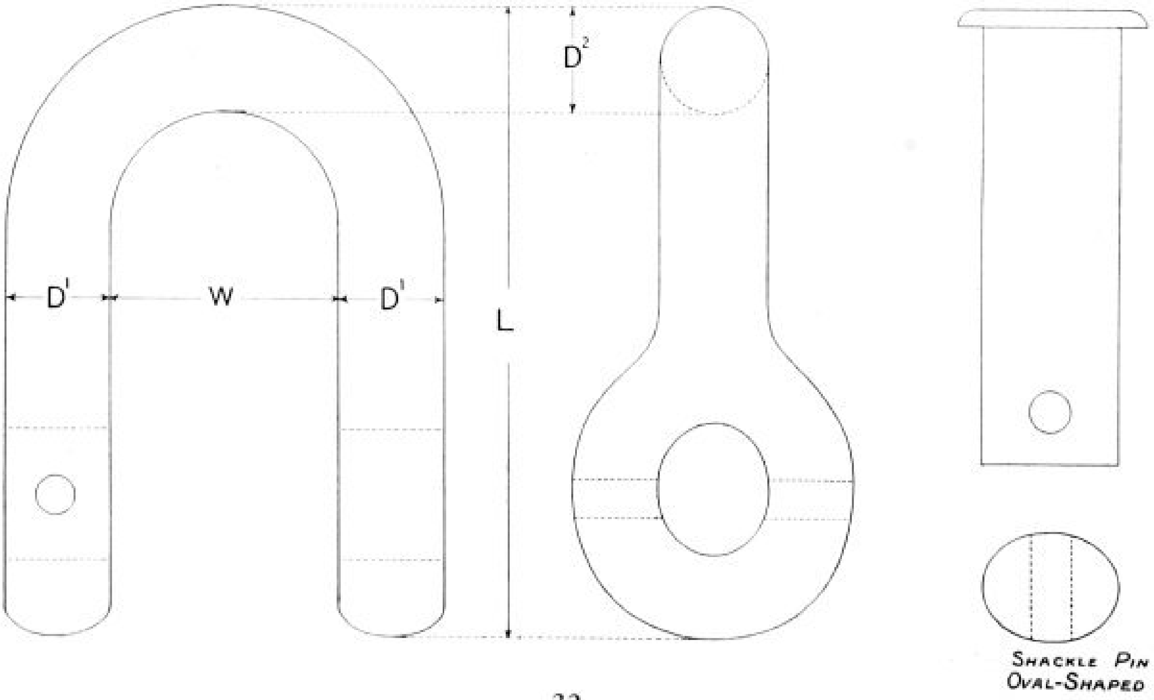
Joining and Anchor Shackles

To Lloyd's Register of Shipping Specifications

JOINING SHACKLE — "D"



END OR ANCHOR SHACKLE — "F"



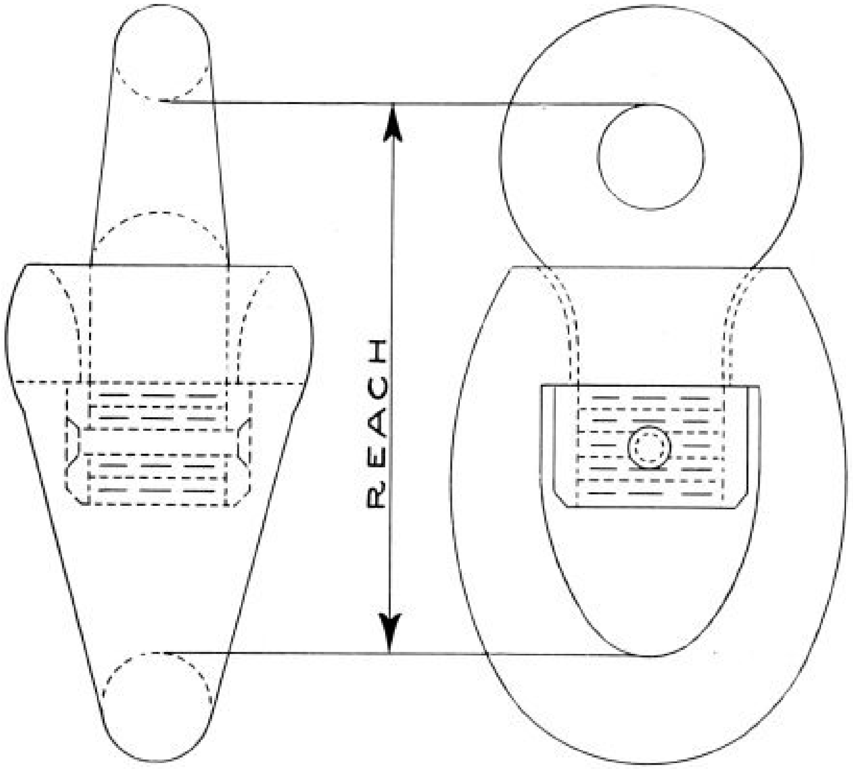
Dimensions and Weights of Shackles

Approved by Lloyd's Register of Shipping, April, 1915

Size of Chain on which Used in Inches	Joining Shackles "D"				End or Anchor Shackles "F"				
	"D" Diameter of Material in Inches	"L" Length of Shackle Outside in Inches	"W" Width of Shackle Outside in Inches	Approximate Weight Including Pin in Pounds	"D^1" Diameter of Material at Sides in Inches	"D^2" Diameter of Material at End in Inches	"L" Length of Shackle Outside in Inches	"W" Width of Shackle in the Clear in Inches	Approximate Weight Including Pin in Pounds
5/8	13/16	4 7/16	2 1/2	2 1/8	7/8	15/16	5 1/2	2	5
11/16	7/8	4 7/8	2 3/4	3	31/32	1 1/32	6 1/16	2 1/4	7
3/4	31/32	5 11/32	3	3 3/4	1 1/16	1 1/8	6 19/32	2 3/8	8
13/16	1 1/16	5 25/32	3 1/4	5 1/2	1 1/8	1 7/32	7 5/32	2 1/2	10
7/8	1 1/8	6 7/32	3 1/2	6	1 7/32	1 5/16	7 11/16	2 3/4	11
15/16	1 7/32	6 21/32	3 3/4	8 1/2	1 5/16	1 13/32	8 1/4	3	13
1	1 5/16	7 3/32	4	10	1 13/32	1 1/2	8 13/16	3 1/8	16
1 1/16	1 3/8	7 17/32	4 1/4	11	1 1/2	1 19/32	9 11/32	3 3/8	20
1 1/8	1 15/32	8	4 1/2	13	1 19/32	1 11/16	9 29/32	3 1/2	22
1 3/16	1 17/32	8 7/16	4 3/4	16	1 21/32	1 25/32	10 7/16	3 5/8	24
1 1/4	1 5/8	8 7/8	5	18	1 3/4	1 7/8	11	3 3/4	29
1 5/16	1 23/32	9 5/16	5 1/4	21	1 27/32	1 31/32	11 9/16	3 7/8	32
1 3/8	1 25/32	9 3/4	5 1/2	23	1 15/16	2 1/16	12 3/32	4	39
1 7/16	1 7/8	10 7/32	5 3/4	27	2	2 5/32	12 21/32	4 1/8	43
1 1/2	1 15/16	10 21/32	6	31	2 3/32	2 1/4	13 3/16	4 1/4	46
1 9/16	2 1/32	11 3/32	6 1/4	35	2 3/16	2 11/32	13 3/4	4 3/8	50
1 5/8	2 1/8	11 17/32	6 1/2	40	2 9/32	2 7/16	14 5/16	4 1/2	54
1 11/16	2 3/16	11 31/32	6 3/4	43	2 3/8	2 17/32	14 27/32	4 5/8	69
1 3/4	2 9/32	12 7/16	7	49	2 7/16	2 5/8	15 13/32	4 3/4	73
1 13/16	2 3/8	12 7/8	7 1/4	55	2 17/32	2 23/32	15 15/16	4 7/8	84
1 7/8	2 7/16	13 5/16	7 1/2	60	2 5/8	2 13/16	16 1/2	5	98
1 15/16	2 17/32	13 3/4	7 3/4	67	2 23/32	2 29/32	17 1/16	5 1/4	107
2	2 19/32	14 3/16	8	73	2 13/16	3	17 19/32	5 1/2	122
2 1/16	2 11/16	14 5/8	8 1/4	82	2 7/8	3 3/32	18 5/32	5 3/4	124
2 1/8	2 3/4	15 3/32	8 1/2	89	2 31/32	3 3/16	18 11/16	6	140
2 3/16	2 27/32	15 17/32	8 3/4	94	3 1/16	3 9/32	19 1/4	6 1/4	149
2 1/4	2 15/16	15 31/32	9	99	3 5/32	3 3/8	19 13/16	6 1/2	162
2 5/16	3	16 13/32	9 1/4	112	3 1/4	3 15/32	20 11/32	6 3/4	173
2 3/8	3 3/32	16 7/8	9 1/2	124	3 11/32	3 9/16	20 29/32	7	188
2 7/16	3 5/32	17 5/16	9 3/4	130	3 13/32	3 21/32	21 7/16	7 1/4	193
2 1/2	3 1/4	17 3/4	10	136	3 1/2	3 3/4	22	7 1/2	220
2 9/16	3 11/32	18 3/16	10 1/4	144	3 19/32	3 27/32	22 9/16	7 3/4	251
2 5/8	3 13/32	18 5/8	10 1/2	155	3 11/16	3 15/16	23 3/32	8	266
2 11/16	3 1/2	19 3/32	10 3/4	176	3 3/4	4 1/32	23 21/32	8 1/4	291
2 3/4	3 19/32	19 17/32	11	192	3 27/32	4 1/8	24 3/16	8 1/2	321
2 13/16	3 21/32	19 31/32	11 1/4	202	3 15/16	4 7/32	24 3/4	8 3/4	333
2 7/8	3 3/4	20 13/32	11 1/2	215	4 1/32	4 5/16	25 5/16	9	360
2 15/16	3 13/16	20 7/8	11 3/4	226	4 1/8	4 13/32	25 27/32	9 1/4	386
3	3 29/32	21 5/16	12	243	4 3/16	4 1/2	26 13/32	9 1/2	404

Swivels

For Stud Link Anchor Chain

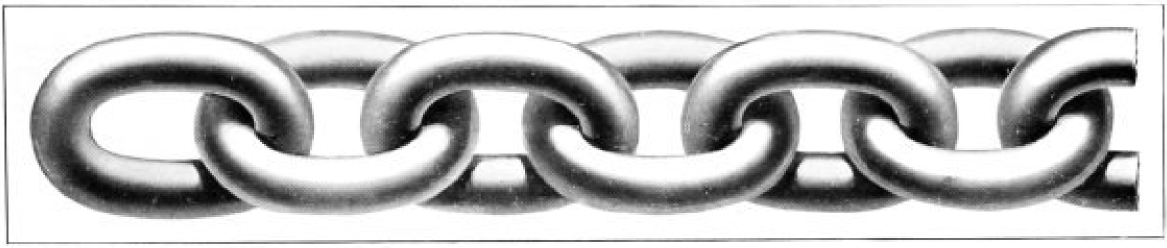


Size of Chain on which used in Inches	Reach in Inches	Hole in Eye in Inches	Diameter of Screw in Inches	Approximate Weight—Pounds
$\frac{3}{4}$	$5\frac{15}{16}$	$1\frac{1}{4}$	$1\frac{1}{2}$	9
1	$7\frac{13}{16}$	$1\frac{5}{8}$	$1\frac{7}{8}$	18
$1\frac{1}{4}$	10	$2\frac{1}{16}$	$2\frac{3}{8}$	50
$1\frac{1}{2}$	12	$2\frac{7}{16}$	$2\frac{7}{8}$	63
$1\frac{3}{4}$	$13\frac{1}{2}$	3	$3\frac{1}{4}$	80
2	$15\frac{13}{16}$	$3\frac{1}{4}$	$3\frac{5}{8}$	154
$2\frac{1}{4}$	$17\frac{3}{4}$	$3\frac{11}{16}$	4	191
$2\frac{1}{2}$	$19\frac{5}{8}$	$4\frac{1}{8}$	$4\frac{1}{2}$	277
$2\frac{3}{4}$	$21\frac{5}{16}$	$4\frac{1}{2}$	5	392
3	$23\frac{1}{4}$	$4\frac{7}{8}$	$5\frac{1}{2}$	511
$3\frac{1}{4}$	$25\frac{3}{16}$	$5\frac{5}{16}$	6	622

This swivel was designed by our Engineering Department and has been approved by both the Lloyd's Register of Shipping and the American Bureau of Shipping for use in Stud Link Chain. Smaller sizes of Swivels shown on page 81.

Close Link Anchor or Stream Chain

For use on Mooring Anchors



Made from refined wrought iron.

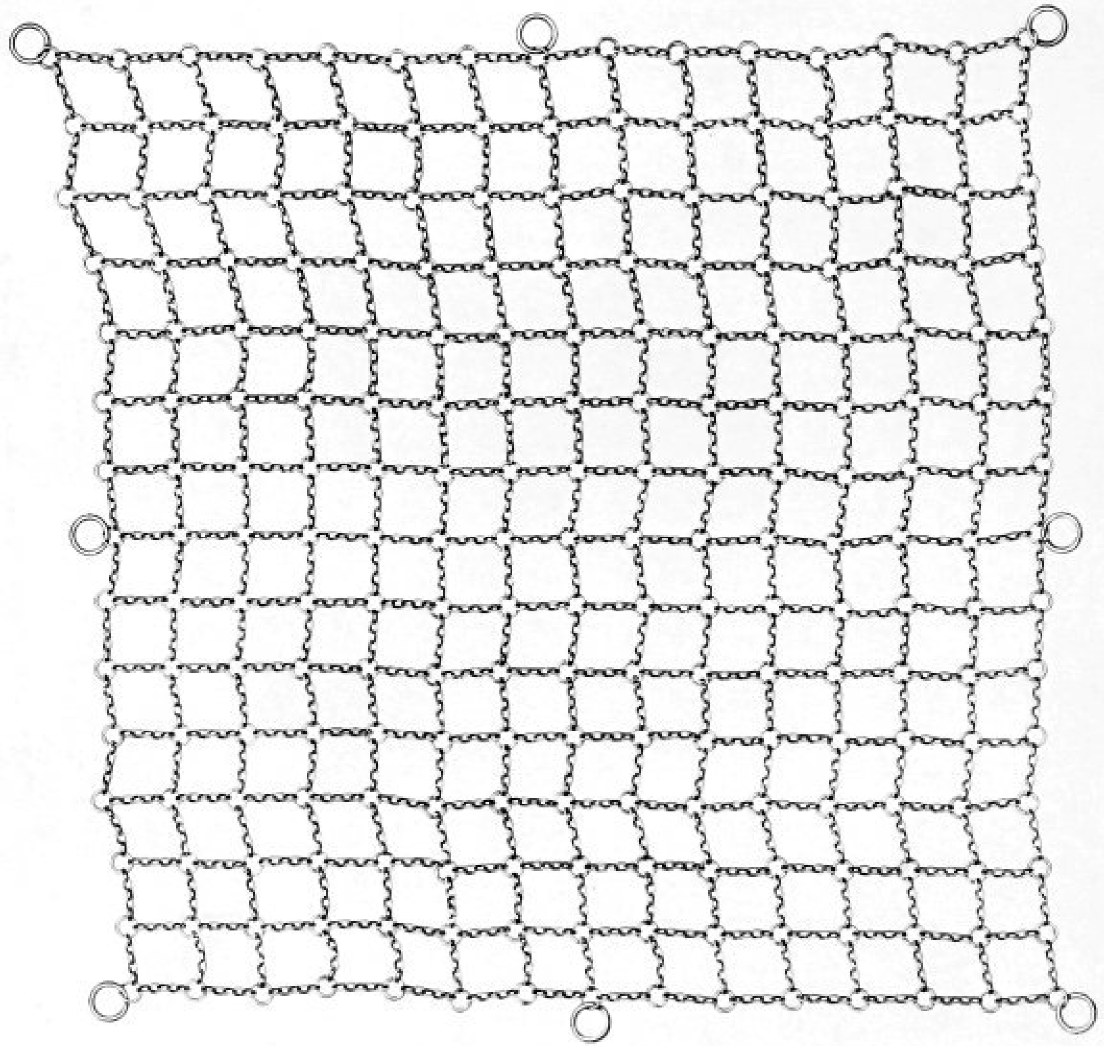
We are prepared to furnish this type of chain in all sizes, made to Lloyd's Register of Shipping, American Bureau of Shipping or Acco specifications, and test certificate will be furnished.

Regularly supplied Blacked.

The proof test for Unstudded Close Link Anchor Chain is two-thirds of the proof test required for Stud Link Chain of the same size. The breaking test is double the proof test. Refer to pages 26 to 29 inclusive, for tests of Stud Link Chain.

Orders should specify the length of the chain required and the exact number and style of shackles wanted. Shackles listed on pages 30 to 33 inclusive, and 74 to 77 inclusive.

Chain Cargo Nets



Made in any size or shape desired. Regular sizes and dimensions are as follows:

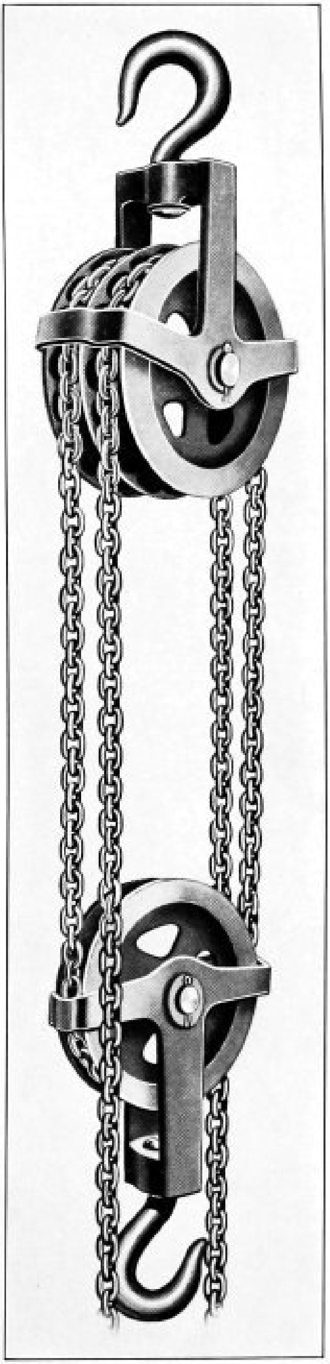
Chain . . . $\frac{1}{4}$, $\frac{5}{16}$ and $\frac{3}{8}$ inch Mesh . . . 7 inches square

Complete Net, 8 x 8, 9 x 9 or 10 x 10 feet square

Regularly supplied Self-colored

Block or Pocket Wheel Chain

Bright



For use on chain blocks of all descriptions, and on pocket and grooved wheels.

We make a specialty of Block Chain for use on chain hoists, every link of which is accurately gauged.

Hand Chains are made either endless or in long lengths, and Load Chains in any length specified.

The highest grade of material is used in the manufacture of these chains, possessing ample strength and wearing qualities.

To properly manufacture Pocket Wheel Chain it is necessary for us to have the wheel casting to fit the chain as it is made. Each link is fitted to the pocket of the wheel, and when completed the entire chain is run over the wheel on all four sides. After proof-testing, each link is carefully examined and the chain again run over the wheel. This is the only method by which the chain can be guaranteed to work satisfactorily.

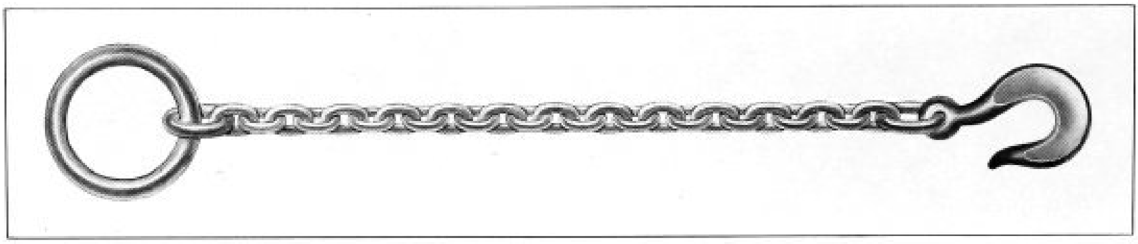
Sling Chains

For use in foundries, machine shops, mills, by contractors, and for work of all kinds where it is necessary to use cranes, derricks, etc., for moving material from one part of the works to another and for loading material on cars, ships, etc.

Should always be made from our H. B. or Ajax Grade Dredge Chain, shown on pages 18 to 23 inclusive.

We are prepared to make any special type of Sling Chain.

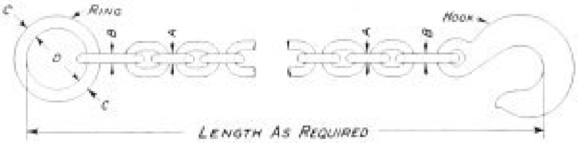
Regularly supplied Blacked.



Single

Single Sling Chains

Standard Sizes of Rings and Hooks



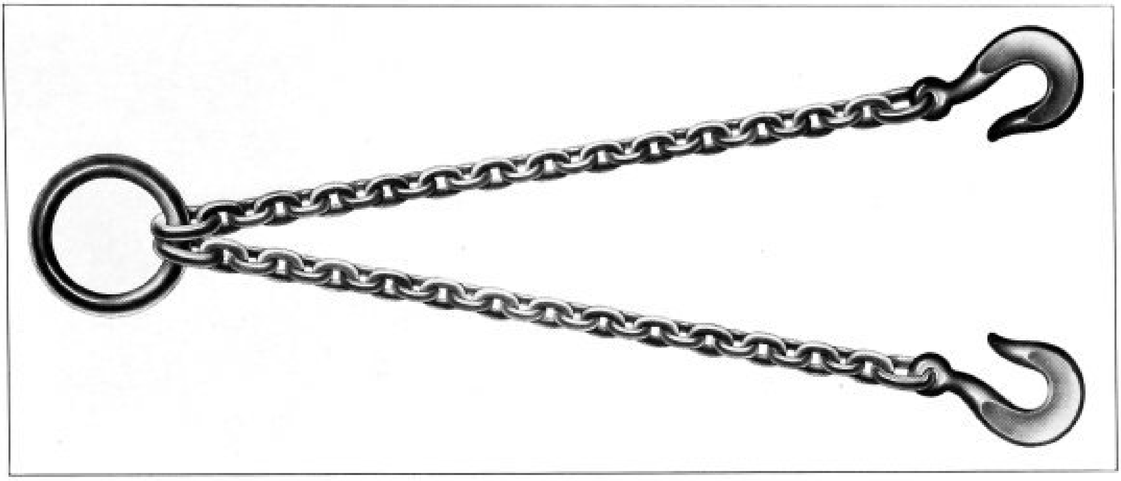
Size Chain A	Material in End Link B	Size of Ring C x D	* Hook No.	Size Chain A	Material in End Link B	Size of Ring C x D	* Hook No.
$\frac{1}{4}$	$\frac{5}{16}$	$\frac{1}{2}$ x $2\frac{1}{8}$	24	$\frac{7}{8}$	1	$1\frac{5}{8}$ x $6\frac{1}{2}$	64
$\frac{5}{16}$	$\frac{3}{8}$	$\frac{9}{16}$ x $2\frac{3}{8}$	25	1	$1\frac{1}{8}$	$1\frac{3}{4}$ x 7	65
$\frac{3}{8}$	$\frac{7}{16}$	$\frac{5}{8}$ x $2\frac{1}{2}$	26	$1\frac{1}{8}$	$1\frac{1}{4}$	$1\frac{7}{8}$ x 8	66
$\frac{7}{16}$	$\frac{1}{2}$	$\frac{3}{4}$ x 3	61	$1\frac{1}{4}$	$1\frac{1}{2}$	$2\frac{1}{8}$ x 9	67
$\frac{1}{2}$	$\frac{5}{8}$	$\frac{7}{8}$ x $3\frac{1}{2}$	61	$1\frac{3}{8}$	$1\frac{5}{8}$	$2\frac{1}{4}$ x 9	68
$\frac{5}{8}$	$\frac{3}{4}$	$1\frac{1}{8}$ x 5	62	$1\frac{1}{2}$	$1\frac{3}{4}$	$2\frac{1}{2}$ x10	69
$\frac{3}{4}$	$\frac{7}{8}$	$1\frac{3}{8}$ x 6	63				

* See pages 78 and 80 for dimensions of Hooks. Dimensions are in inches.

Upon request copy of drawing will be supplied on which sizes and specifications of special Sling Chains can be indicated.

Table on page 40 shows recommended sizes of Sling Chains.

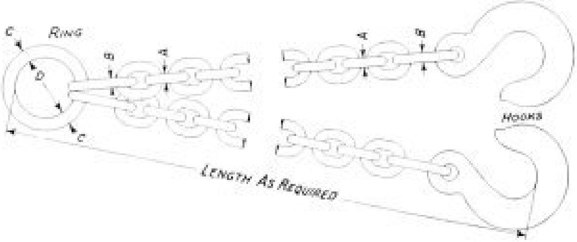
Sling Chains



Double

Double Sling Chains

Standard Sizes of Rings and Hooks



Size Chain A	Material in End Link B	Size of Ring C x D	* Hook No.	Size Chain A	Material in End Link B	Size of Ring C x D	* Hook No.
1/4	5/16	9/16 x 2 3/8	24	7/8	1	1 7/8 x 8	64
5/16	3/8	5/8 x 2 1/2	25	1	1 1/8	2 1/8 x 9	65
3/8	7/16	3/4 x 3	26	1 1/8	1 1/4	2 1/4 x 9	66
7/16	1/2	1 x 4	61	1 1/4	1 1/2	2 5/8 x 10	67
1/2	5/8	1 1/8 x 5	61	1 3/8	1 5/8	2 3/4 x 10	68
5/8	3/4	1 3/8 x 6	62	1 1/2	1 3/4	3 x 12	69
3/4	7/8	1 3/4 x 7	63				

*See pages 78 and 80 for dimensions of hooks. Dimensions are in inches.

Upon request copy of drawing will be supplied on which sizes and specifications of special Sling Chains can be indicated.

Table on page 40 shows recommended sizes of Sling Chains.

Sling Chains

Sizes Recommended for Given Loads

H. B. Dredge Chain (Page 20)

Load Pounds	Single Sling Inches	Double Sling Inches	Load Pounds	Single Sling Inches	Double Sling Inches
1,125	* $\frac{1}{4}$	.....	22,400	$1\frac{1}{8}$	$\frac{7}{8}$
1,700	* $\frac{5}{16}$	* $\frac{1}{4}$	28,800	$1\frac{1}{4}$	1
2,700	$\frac{3}{8}$	* $\frac{5}{16}$	34,500	$1\frac{3}{8}$	$1\frac{1}{8}$
3,450	$\frac{7}{16}$	$\frac{3}{8}$	40,800	$1\frac{1}{2}$	$1\frac{1}{4}$
4,325	$\frac{1}{2}$	$\frac{3}{8}$	46,100	$1\frac{5}{8}$	$1\frac{1}{4}$
5,525	$\frac{9}{16}$	$\frac{7}{16}$	52,500	$1\frac{3}{4}$	$1\frac{3}{8}$
6,925	$\frac{5}{8}$	$\frac{1}{2}$	58,500	$1\frac{7}{8}$	$1\frac{1}{2}$
8,550	$\frac{11}{16}$	$\frac{9}{16}$	66,000	2	$1\frac{5}{8}$
10,150	$\frac{3}{4}$	$\frac{5}{8}$	74,400	.....	$1\frac{5}{8}$
12,250	$\frac{13}{16}$	$\frac{11}{16}$	84,000	.....	$1\frac{3}{4}$
14,000	$\frac{7}{8}$	$\frac{3}{4}$	93,600	.....	$1\frac{7}{8}$
18,600	1	$\frac{13}{16}$	107,000	.....	2

*BBB Chain used on these sizes.

Ajax Dredge Chain (Page 22)

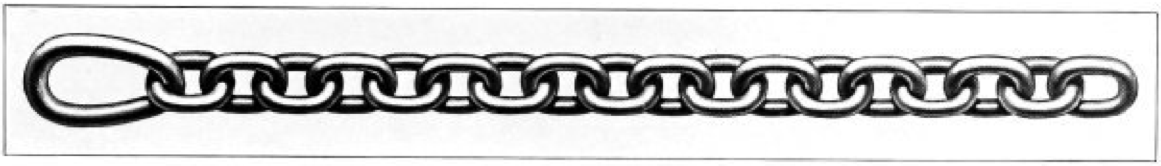
2,970	$\frac{3}{8}$	.....	31,680	$1\frac{1}{4}$	1
3,800	$\frac{7}{16}$	.....	37,950	$1\frac{3}{8}$	$1\frac{1}{8}$
4,750	$\frac{1}{2}$	$\frac{3}{8}$	44,900	$1\frac{1}{2}$	$1\frac{1}{4}$
6,080	$\frac{9}{16}$	$\frac{7}{16}$	50,700	$1\frac{5}{8}$	$1\frac{1}{4}$
7,620	$\frac{5}{8}$	$\frac{1}{2}$	57,800	$1\frac{3}{4}$	$1\frac{3}{8}$
9,400	$\frac{11}{16}$	$\frac{9}{16}$	60,750	$1\frac{7}{8}$	$1\frac{3}{8}$
11,160	$\frac{3}{4}$	$\frac{5}{8}$	64,400	$1\frac{7}{8}$	$1\frac{1}{2}$
13,480	$\frac{13}{16}$	$\frac{11}{16}$	71,800	2	$1\frac{1}{2}$
15,050	$\frac{7}{8}$	$\frac{11}{16}$	81,900	.....	$1\frac{5}{8}$
17,850	1	$\frac{3}{4}$	92,500	.....	$1\frac{3}{4}$
20,460	1	$\frac{13}{16}$	103,000	.....	$1\frac{7}{8}$
24,600	$1\frac{1}{8}$	$\frac{7}{8}$	117,300	.....	2

Note:—Sizes of Double Sling Chains are based on the assumption that the angle between the two legs is not over 75 degrees, and that approximately one-half the load is carried by each leg. If these conditions are exceeded, a heavier size chain should be used.

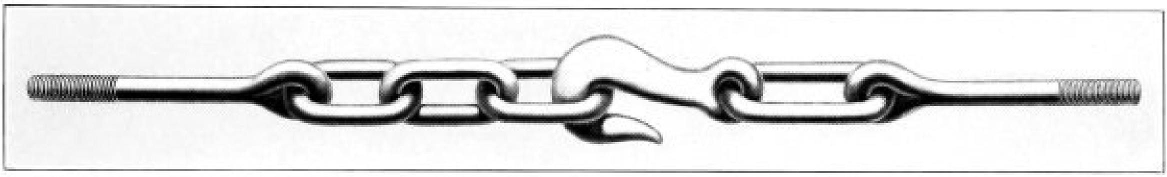
Railroad Chains

On this and the following pages we illustrate certain types of Railroad Chains that are regularly manufactured. Requirements may vary considerably from the assembly of construction shown, and any combination of chain and attachments can be furnished upon receipt of specifications or drawing.

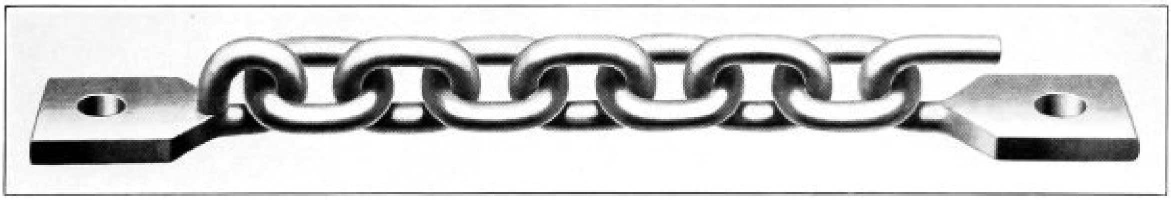
Railroad Chains are furnished Self-colored unless otherwise ordered.



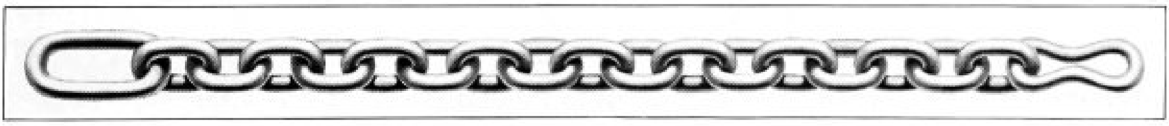
Brake Chain



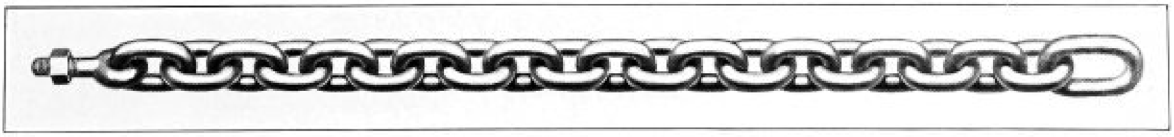
Safety Chain



Brake Beam Chain

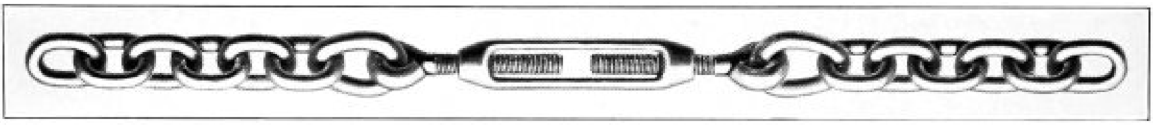


Brake Rod Chain

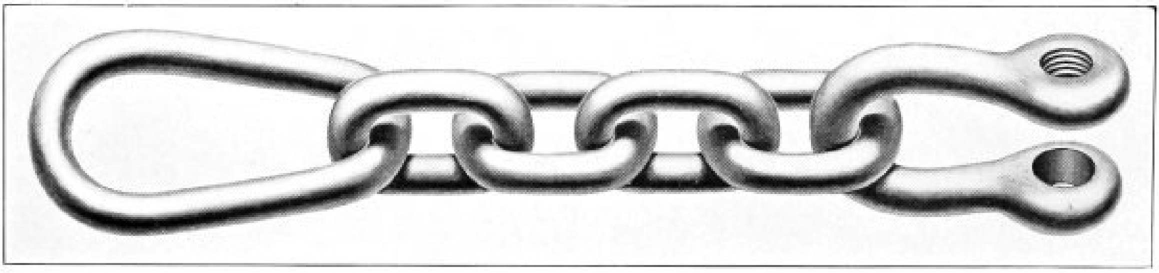


Door Operating Chain

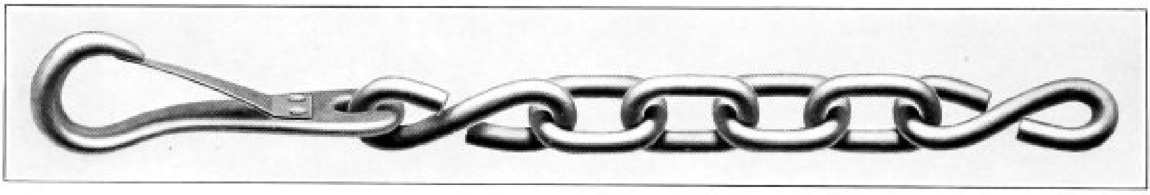
Railroad Chains



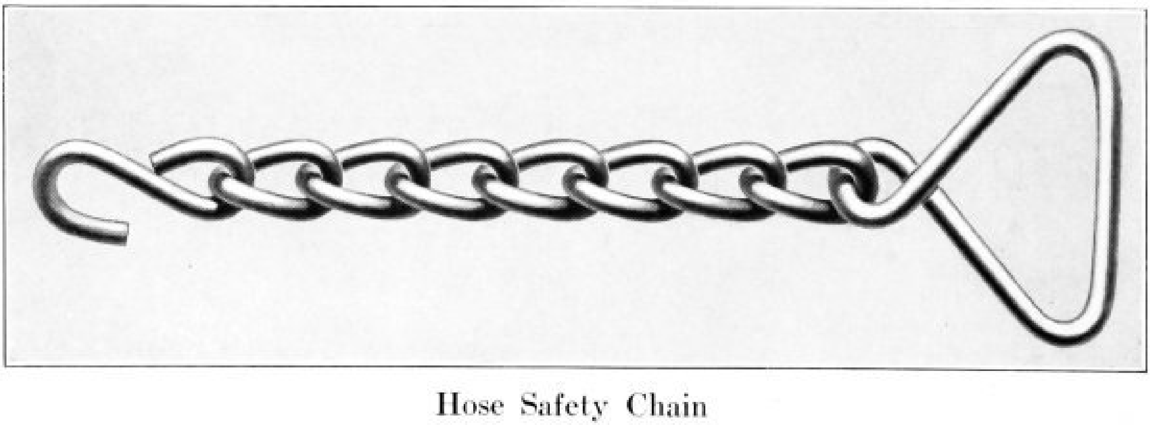
Winding Shaft Chain



Gate Chain

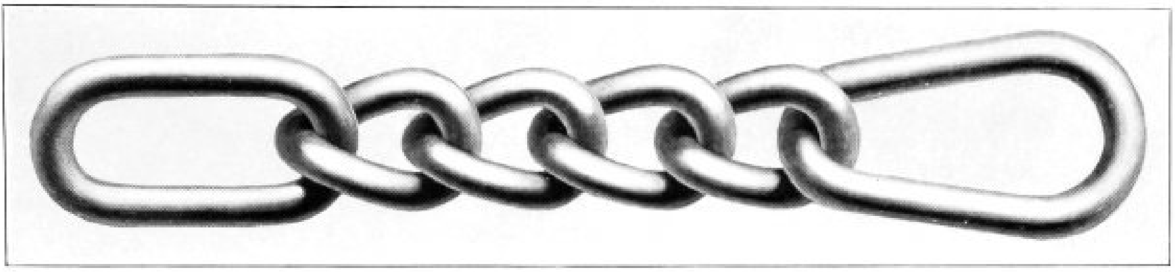


King Pin Key Chain

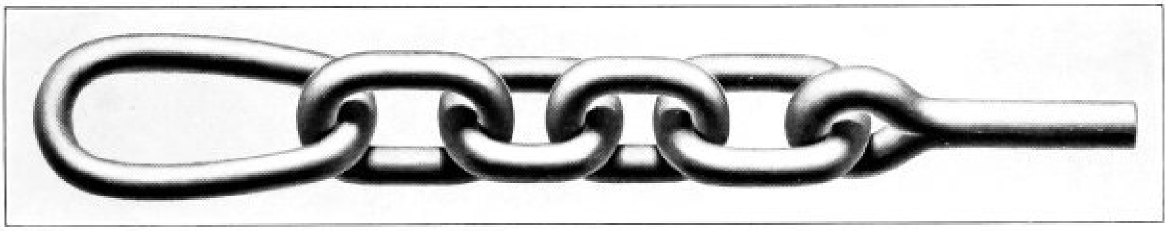


Hose Safety Chain

Railroad Chains

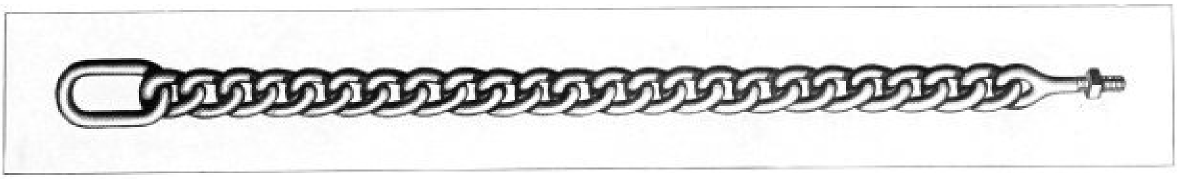


End Door Chain



Brake Beam Safety Chain

Electric Car Brake Chain



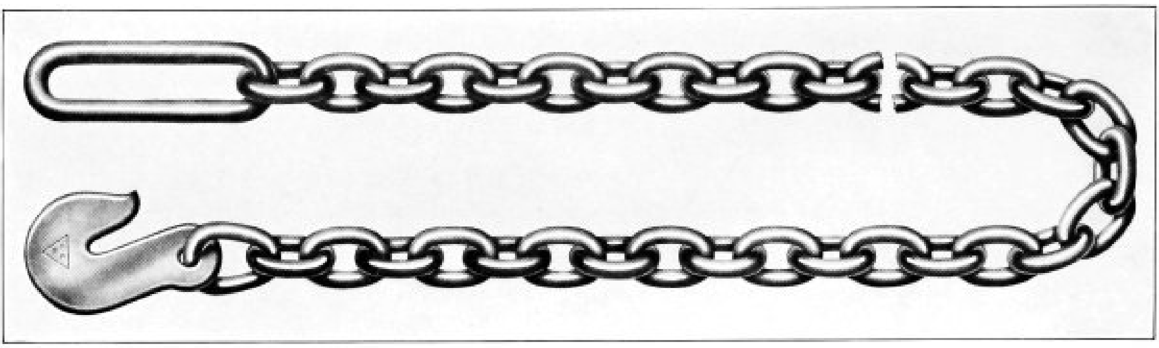
Made in Sizes 5/16, 3/8, 7/16 and 1/2-inch.

For use on Brakes of Electric Street Cars.

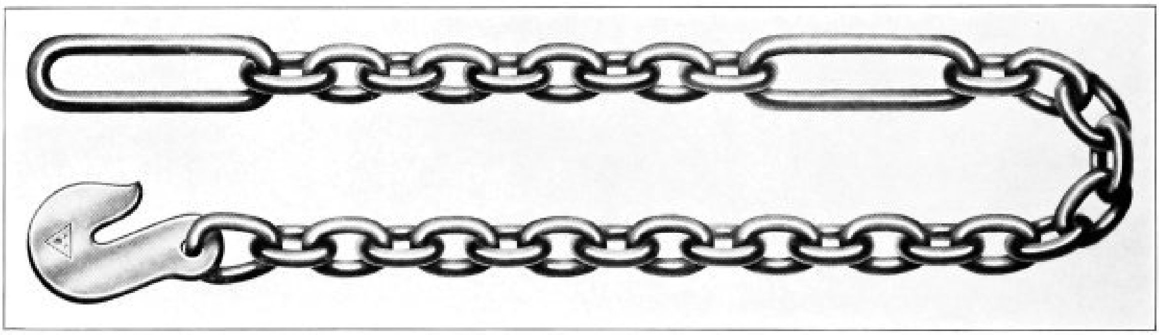
The links are made as short as possible and closely twisted, allowing the chain to wrap snugly around the brake bar.

Furnished in continuous lengths, or to lengths with attachments as specified.

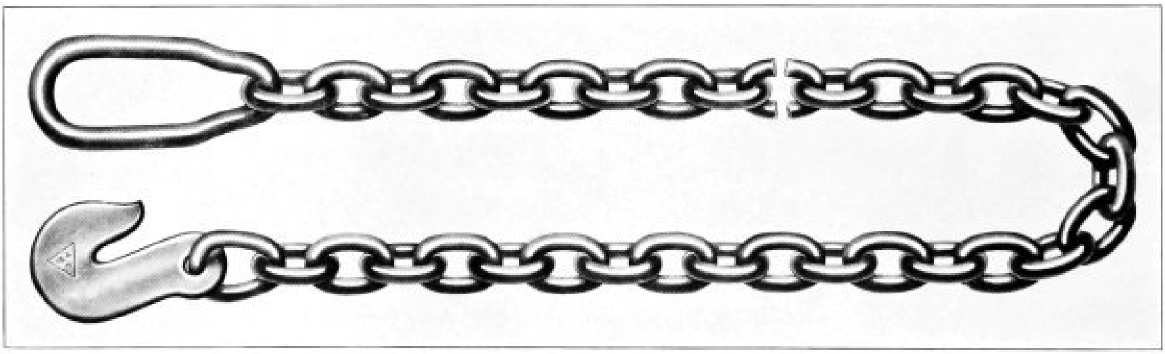
Railroad Switch or Train Chains



Style "A"—No. 7 Grab Hook on one end, large Link on other end



Style "B"—No. 7 Grab Hook on one end, and two large Links



Style "C"—No. 7 Grab Hook on one end, and a special shaped long Link on other end

Made in any size and length required.

Can be supplied with any Hook shown on page 45.

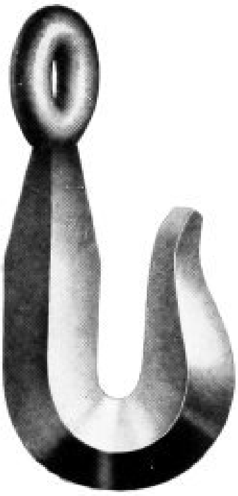
Orders and inquiries should specify the size and length of chains, and style of hooks.

Regularly supplied Self-colored.

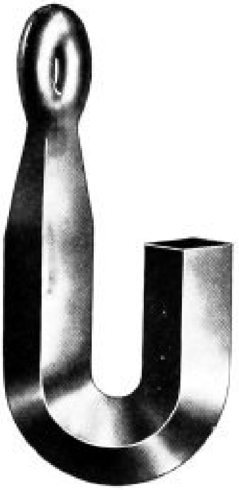
Grab Hooks

Drop-Forged Steel

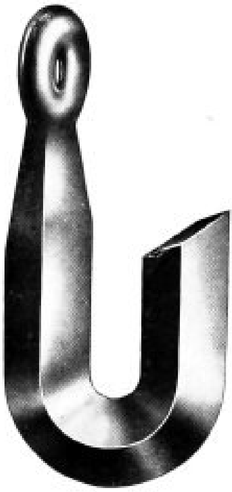
For Railroad Switch or Train Chains



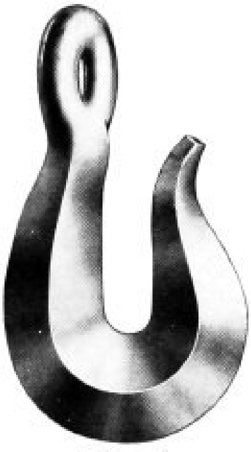
No. 3
Square, Swelled Point



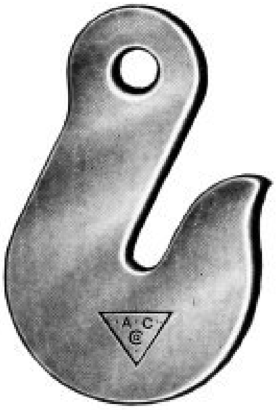
No. 4
Square, Blunt Point



No. 5
Square, Pointed



No. 6
Square, Swelled Point



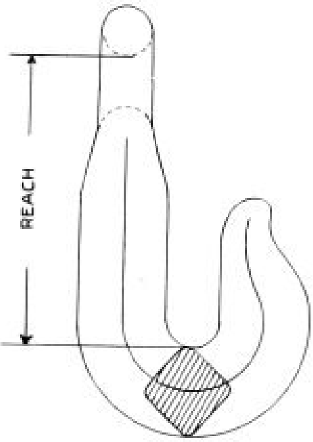
No. 7—Flat
Improved—All Corners Rounded

These hooks are suitable for use on chains ¾-inch to 1⅛-inch inclusive. Orders or inquiries should indicate the style wanted and the size of chain on which they are to be used.

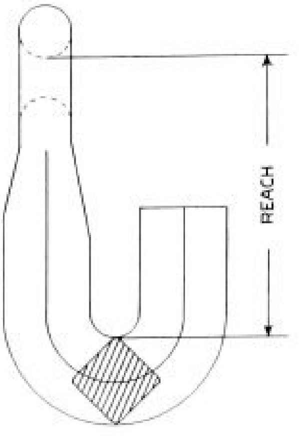
No. 7 Flat Acco Grab Hook is recommended for Railroad Switch Chains because of its strength and general adaptability.

Grab Hooks

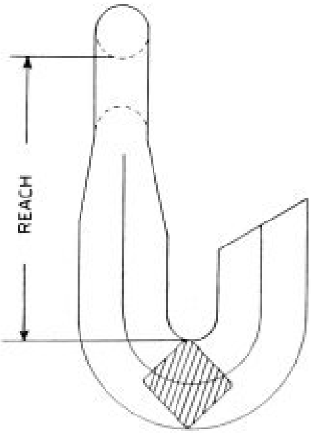
For Railroad Switch or Train Chains



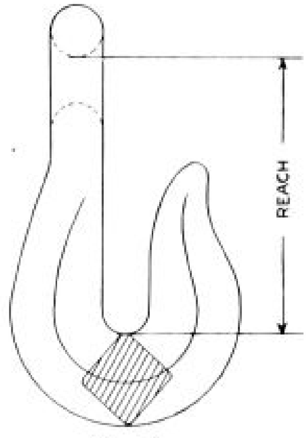
No. 3



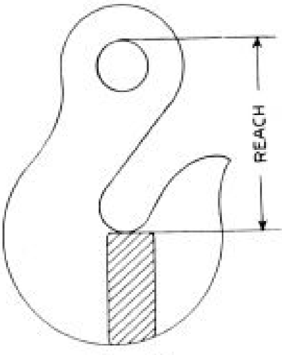
No. 4



No. 5



No. 6

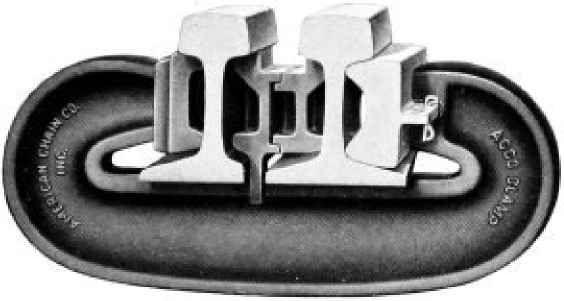


No. 7

Hook No.	Size Material Inches	Reach Inches	Hole in Eye Inches	Approximate Weight each Pounds
3	$1\frac{1}{2}$ square	$7\frac{5}{8}$	1	8
4	$1\frac{3}{4}$ square	$7\frac{13}{16}$	$1\frac{1}{4}$	13
5	$1\frac{3}{4}$ square	$7\frac{13}{16}$	$1\frac{1}{4}$	13
6	2 square	$8\frac{1}{4}$	$1\frac{1}{4}$	17
7	1 x $3\frac{5}{16}$	$5\frac{13}{16}$	$1\frac{1}{4}$	11

Guard Rail Clamps

Acco Drop-Forged



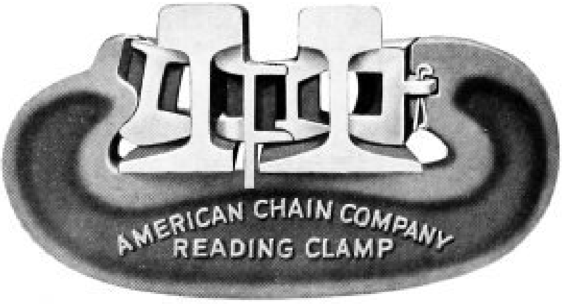
Acco Drop-Forged Guard Rail Clamps are forged to shape from best quality open-hearth steel. They are heat treated after forging.

Fittings are made of cast steel and heat treated.

Yokes are interchangeable and can be used on various rail sections by simply using suitable fittings.

Clamps can be applied without disturbing guard rail.

Reading Cast Steel

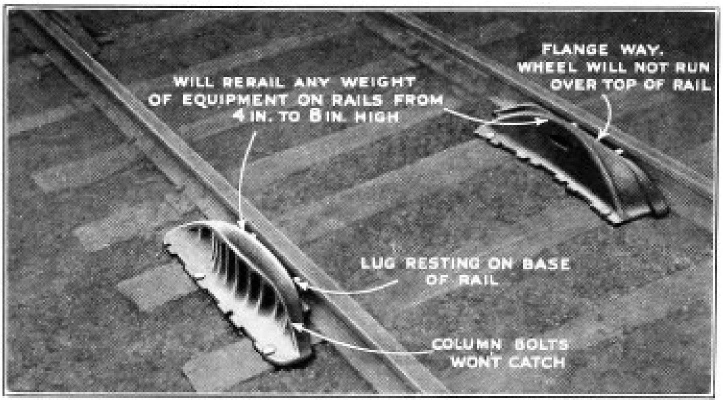


Reading Guard Rail Clamps are made from best quality open-hearth steel cast to shape and specially heat treated.

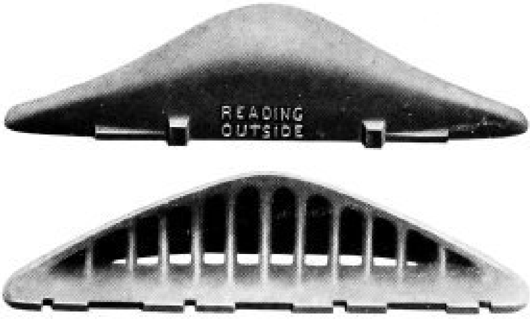
Yokes are interchangeable and can be used on various rail sections by simply using suitable fittings.

Clamps can be applied without disturbing guard rail.

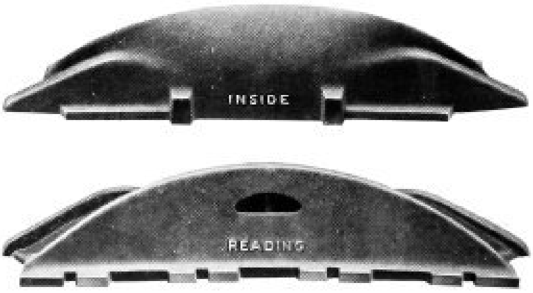
Reading Car and Engine Replacers


WILL RERAIL ANY WEIGHT OF EQUIPMENT ON RAILS FROM 4 IN. TO 8 IN. HIGH
FLANGE WAY. WHEEL WILL NOT RUN OVER TOP OF RAIL
LUG RESTING ON BASE OF RAIL
COLUMN BOLTS WONT CATCH

Spiked in Position



Two Views of Outside Replacers

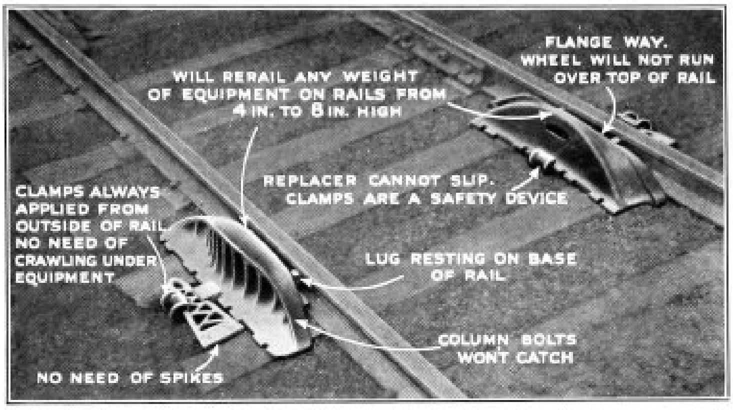


Two Views of Inside Replacers

Reading Replacers are designed along practical lines. Replacers pick up wheels by tread, thus preventing flanges cutting or grooving Replacer.

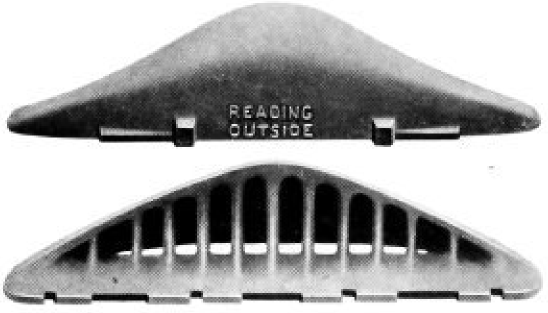
Size	Height of Rail	For Axle Loads to and Including	Designed to Rail
A-7	4 to 8 in.	78,000 pounds	Extra Heavy Cars and Engines
A-1	4 to 6½ in.	78,000 pounds	Extra Heavy Cars and Engines
A	4 to 6½ in.	63,000 pounds	Extra Heavy Cars and Engines
A-2	4 to 6½ in.	45,000 pounds	Cars { For Carrying in Cabooses or on Engines for Car Work
B	3½ to 5 in.	40,000 pounds	Light Cars and Engines
D	up to 3½ in.	30,000 pounds	Light Cars and Engines

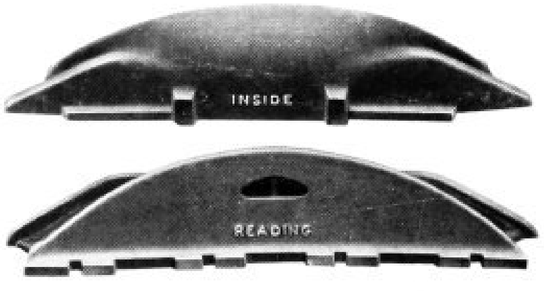
Reading Replacer Clamps


FLANGE WAY. WHEEL WILL NOT RUN OVER TOP OF RAIL
WILL RERAIL ANY WEIGHT OF EQUIPMENT ON RAILS FROM 4 IN. TO 8 IN. HIGH
REPLACER CANNOT SLIP. CLAMPS ARE A SAFETY DEVICE
CLAMPS ALWAYS APPLIED FROM OUTSIDE OF RAIL NO NEED OF CRAWLING UNDER EQUIPMENT
LUG RESTING ON BASE OF RAIL
COLUMN BOLTS WON'T CATCH
NO NEED OF SPIKES

Clamped in Position

Replacer Clamps





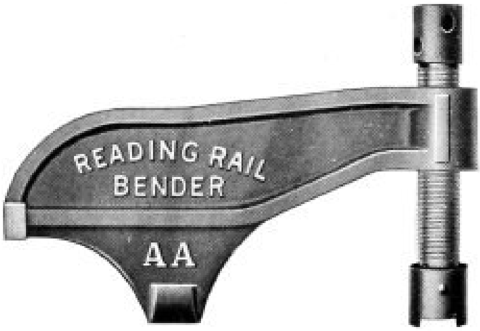
Two Views of Outside Replacers

Two Views of Inside Replacers

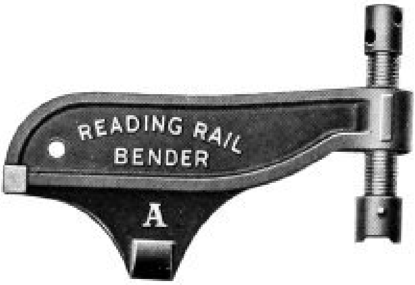
Reading Replacer Clamps are recommended for use when rerailing heavy equipment. Clamping Replacers to rail eliminates possibility of Replacer being forced out of position. In rerailing some of the present-day heavy equipment it is difficult to hold Replacer in position with spikes. Clamps are a positive device when rerailing where ties are bad. Clamps are applied from the outside of the rail in every case, there being no necessity of crawling under equipment. Reading Replacer Clamps are designed to fit any side-the-rail type of Replacer.

Reading Rail Benders

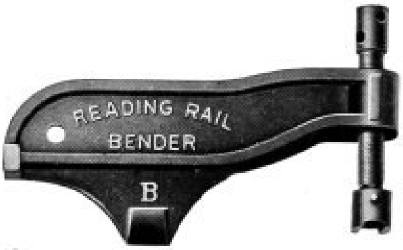
Samson Type



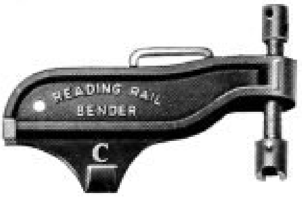
For all T-Rail up to and including 150 lbs.



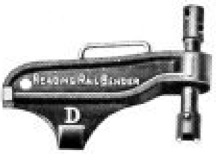
For all T-Rail up to and including 110 lbs.



For all T-Rail up to and including 80 lbs.



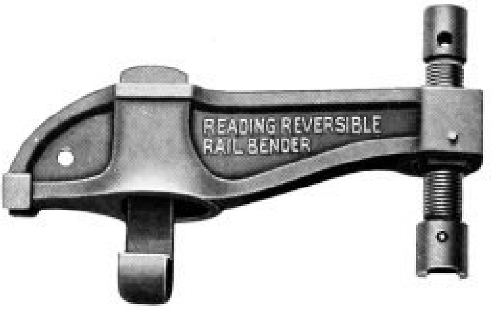
For all T-Rail up to and including 60 lbs.



For all T-Rail up to and including 45 lbs.

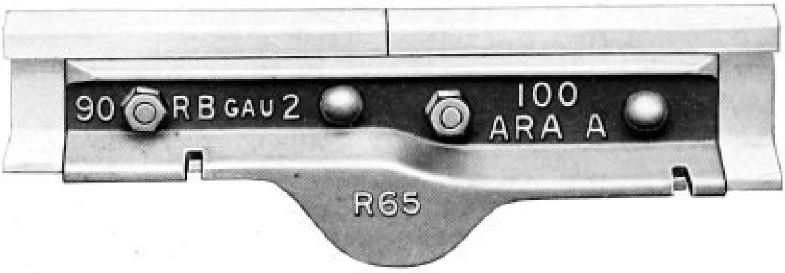
Reversible Rail Benders

The Reading Reversible Rail Bender is a two-in-one bender and can be used left or right hand simply by reversing hook. It is not necessary to add angle bar and extra length of rail, when bending rail near end.

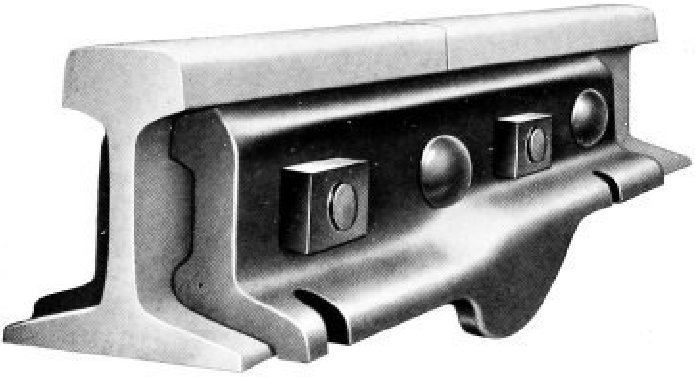


Size A-1 for rail up to and including 110 lbs.
Size A-2 for rail up to and including 150 lbs.

Reading Compromise or Step Joints

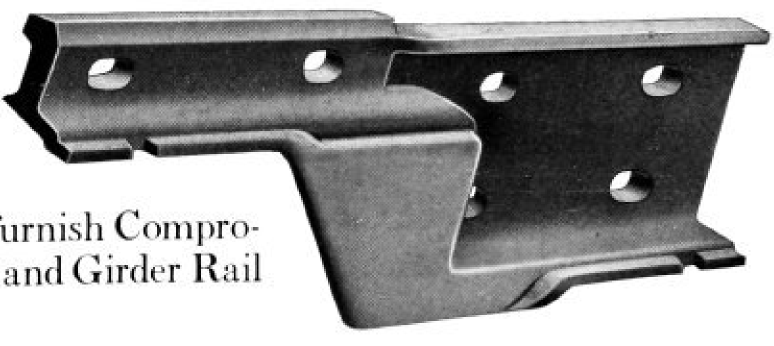


For Tee Rails



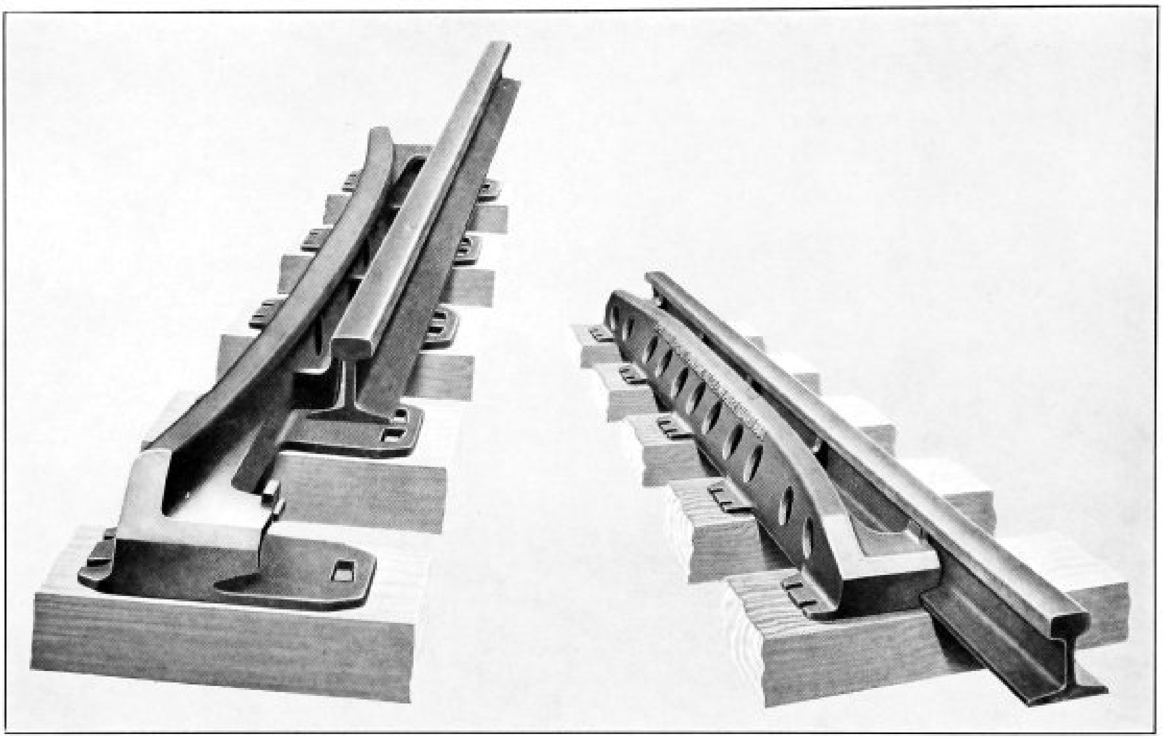
Reading Compromise Joints are made to your specifications. The joint metal is reinforced at points under greatest stress. At point of reinforcement the metal is ⅜ in. heavier than ordinary angle bar. Reading Compromise Joints are made of a special analysis open-hearth steel and heat treated.

For Tee and Girder Rails



We are prepared to furnish Compromise Joints for any Tee and Girder Rail combination.

Acco One-Piece Guard Rail



Type A

Acco One-Piece Guard Rail is made of special analysis open-hearth steel, cast to shape and thoroughly annealed.

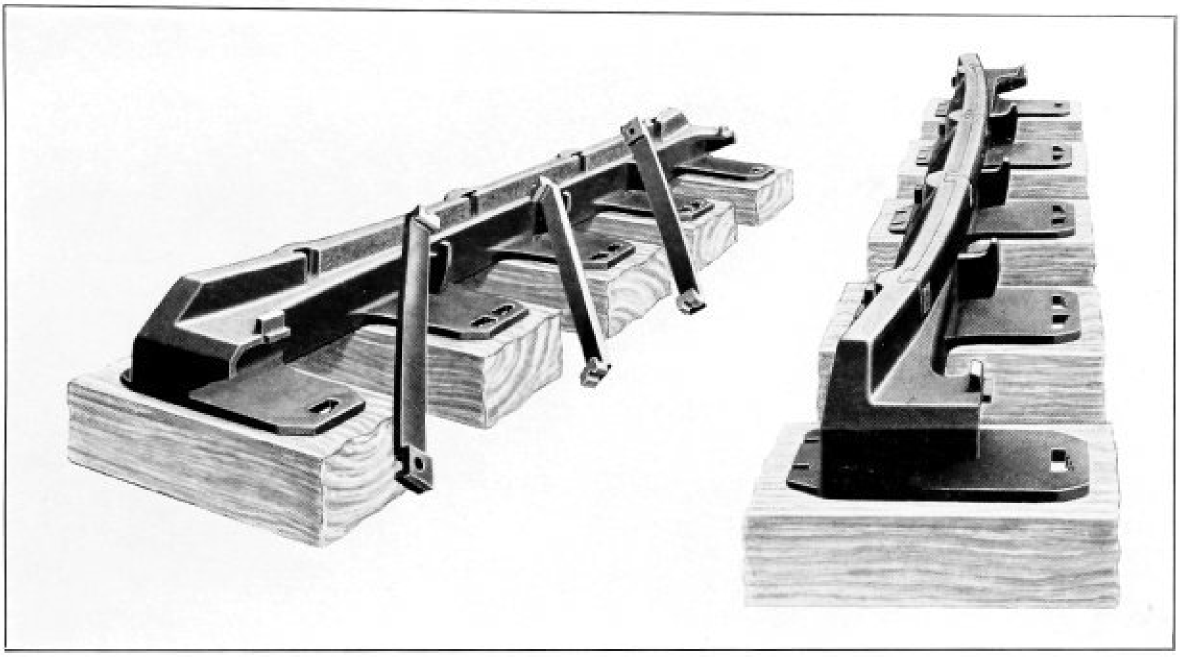
The design eliminates rails, bolts, guard rail clamps, and braces, and incorporates tie plates and foot guards.

It simplifies and reduces the cost of maintenance and provides a protection of the greatest strength.

The above illustration shows in detail the various features embodied in Type A. Special attention is called to the four lugs engaging the under side of the head of traffic rail which prevents the guard rail from tipping, thus eliminating the possibility of increasing the desired flange way. These lugs also engage securely the base of traffic rail, eliminating spiking between the traffic and guard rail.

Ample space is provided between guard rail and base of traffic rail to prevent accumulation of ice and snow.

Acco Renewable Guard Rail



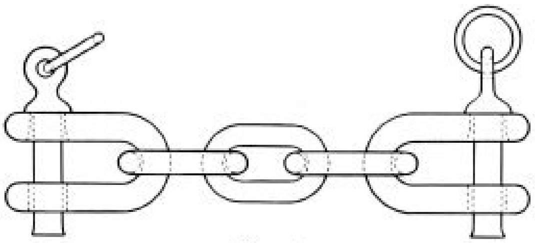
Type C

Acco Renewable Guard Rail (Type C) embodies all the essential features found in **Type A** as heretofore described, and also provides a means for renewing the portion of the guard rail which is subjected to greatest wear. This is accomplished by making it possible to easily remove the worn portions and replace with new wearing inserts. These inserts are made of high-grade manganese steel, and are bolted and locked in the guard rail in a manner which absolutely prevents the possibility of their becoming loose. We carry in stock these inserts, which we can furnish promptly.

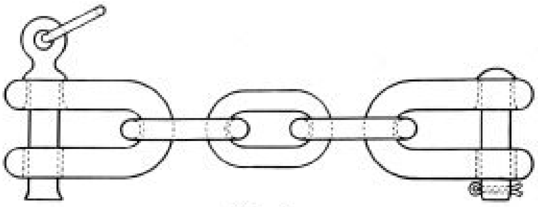
Type B is identical with **Type C**, with the exception that a special analysis heat-treated open-hearth insert is used instead of manganese steel.

Mine Car Couplings

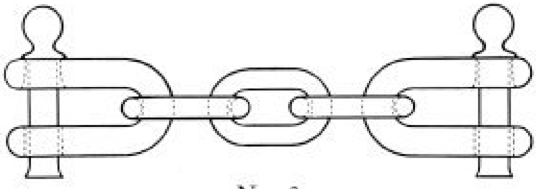
Plain Clevises



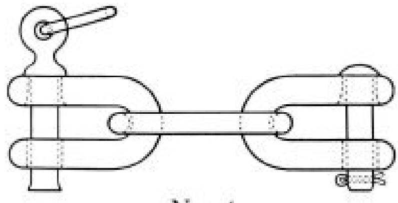
No. 1



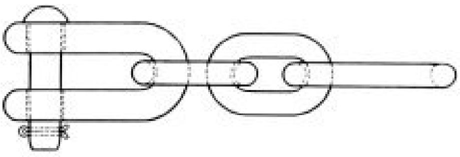
No. 2



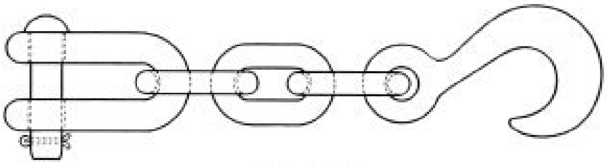
No. 3



No. 4



No. 9



No. 11-B

The Couplings shown above are standard patterns, but any combination of clevises, pins and links can be furnished.

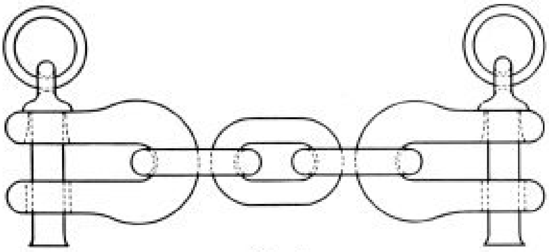
The clevises and pins are drop-forged from open-hearth steel in sizes ¾ inch to 2 inches.

Various styles of coupling pins are illustrated on page 56.

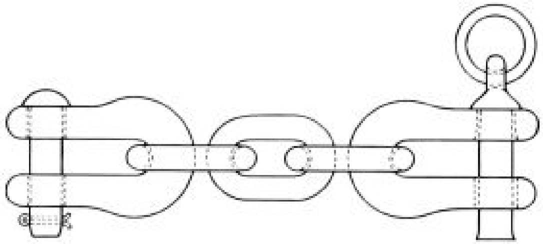
The links are made from our **HB** Grade Iron (see description on page 20). Sizes from ¾ inch to 1½ inches. Length of couplings as required.

Mine Car Couplings

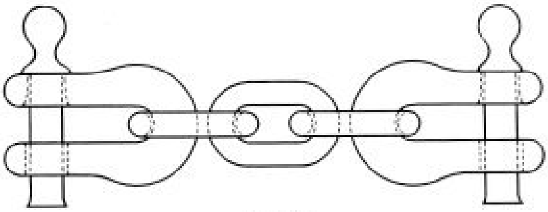
Bell Clevises



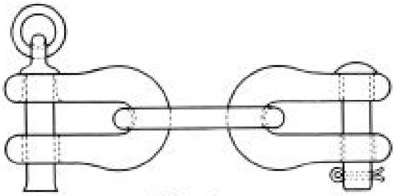
No. 5



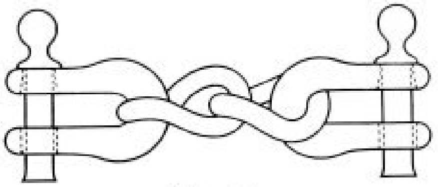
No. 6



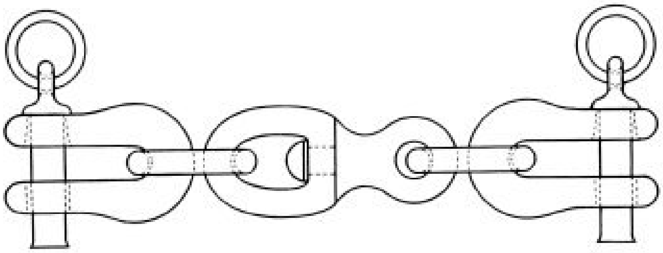
No. 7



No. 8



No. 11



No. 11-A

The Couplings shown above are standard patterns fitted with "Bell" or "Reënforced" Clevises.

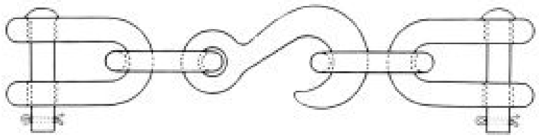
Standard Sizes of Bell Clevises

$1\frac{1}{8}$ inches at neck swelled to $1\frac{1}{2}$ inches round at bend
$1\frac{1}{4}$ inches at neck swelled to $1\frac{3}{4}$ inches round at bend
$1\frac{3}{8}$ inches at neck swelled to $1\frac{7}{8}$ inches round at bend
$1\frac{1}{2}$ inches at neck swelled to 2 inches round at bend

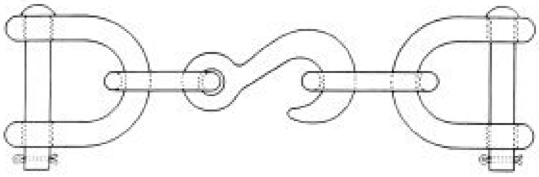
Clevises and pins are drop-forged from open-hearth steel. Any size or style pin can be furnished. Various styles of coupling pins are illustrated on page 56.

The links are made from our HB Grade Iron (see description, page 20). Length of couplings as required.

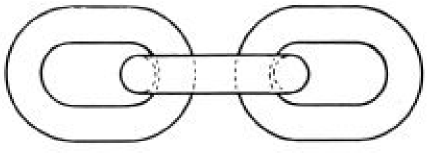
Mine Car Couplings



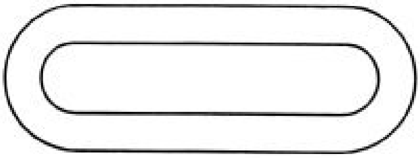
No. 11-C



No. 11-D



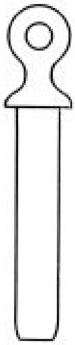
No. 14
Three-Link Coupling



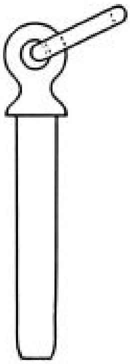
No. 13
Single Link

These links are made from our **HB Grade Iron**, any length or width required. Sizes ¾ inch to 1½ inches.

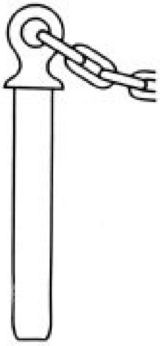
Mine Car Coupling Pins



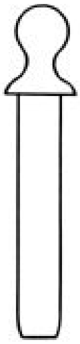
Eye



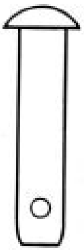
Ring



Chain



Ball Head

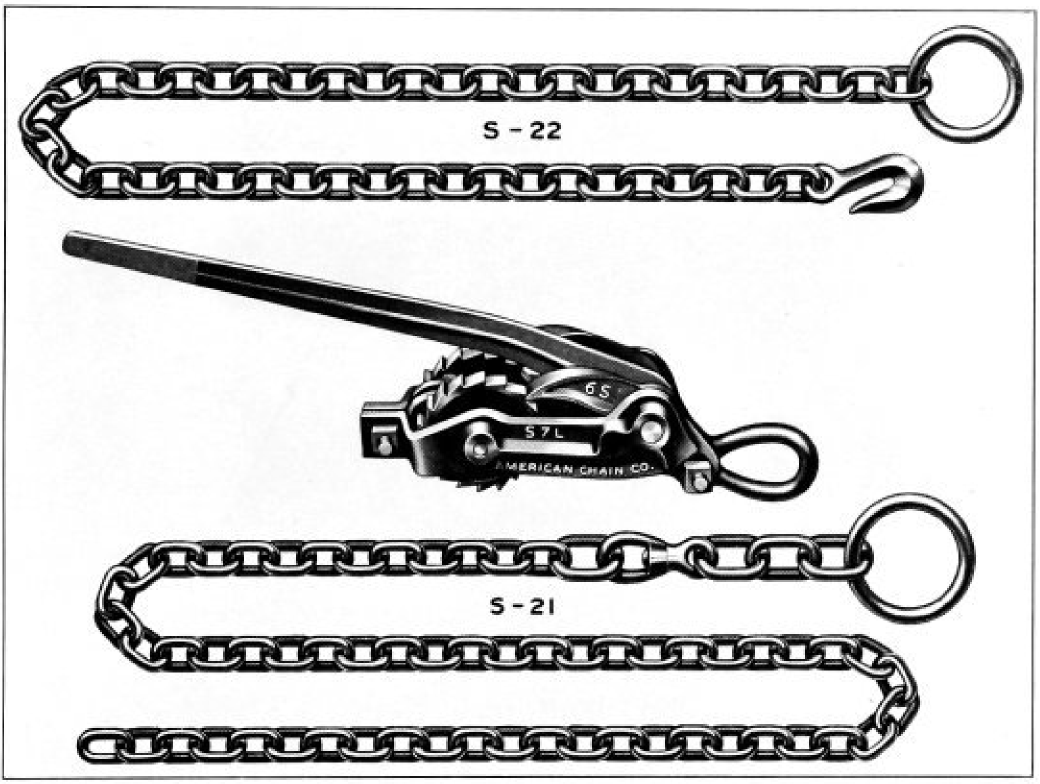


Button Head

These pins are drop-forged from open-hearth steel.
Sizes from ¾ inch round to 2 inches.

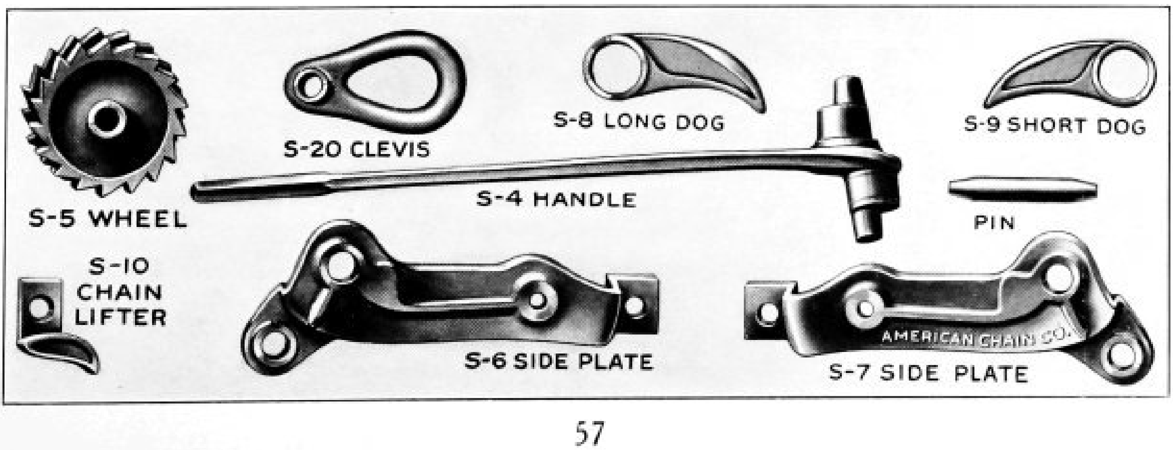
Acco Oil Well Stretcher Jack

The most economical and efficient device for use in repairing pull rods in the oil fields.

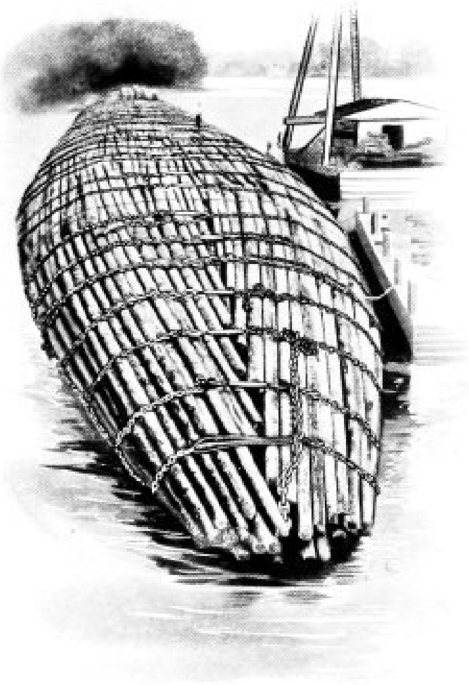


Regularly furnished Blacked Finish.

Repair Parts



Boom or Rafting Chains

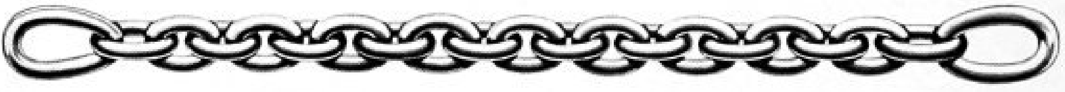


Made from any size of material and any length required. The following illustrations show standard construction, but chains can be supplied to other specifications, which should be furnished with inquiries or orders.

These chains are usually ordered in sizes from ½-inch to 1½-inch inclusive.

If for use in fresh water, steel chains are regularly supplied. If for use in salt water iron chains should be specified.

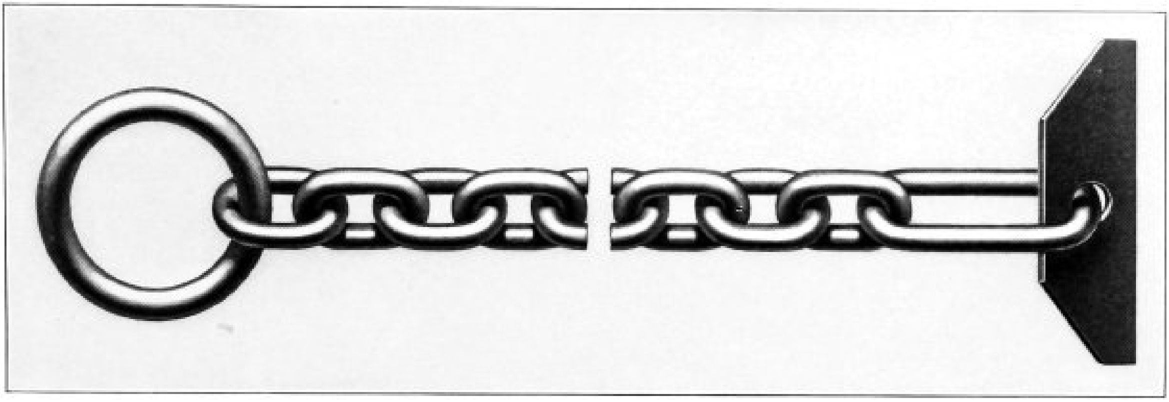
Orders and inquiries should clearly state whether Iron or Steel Chains are required.



Style "A"

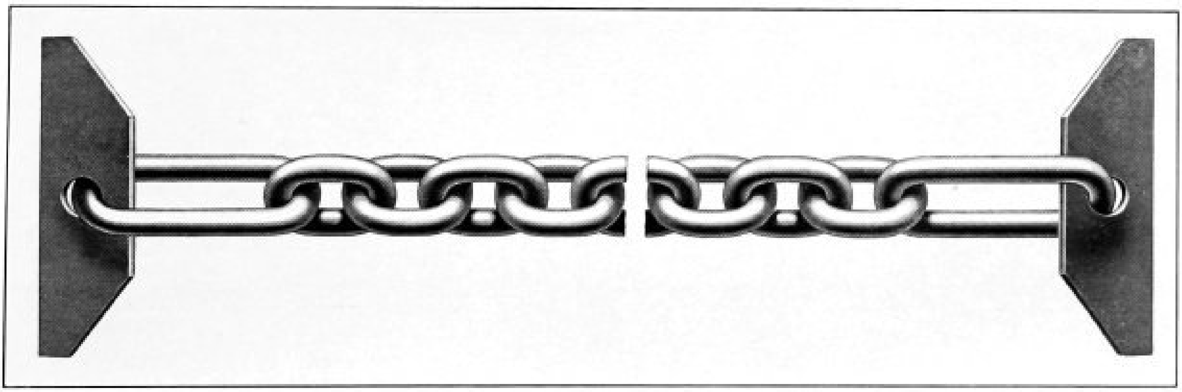
Furnished in any length specified, with one pear-shaped link on each end to connect with shackles. When shackles are required, inquiries and orders should indicate style and quantity wanted with each chain. Shackles illustrated on pages 74 to 77. Regularly supplied Blacked.

Boom or Rafting Chains



Style "B"

Style "B" Chains are furnished from any size of material and any length required, with a Ring on one end and a Sheared Toggle on other end.



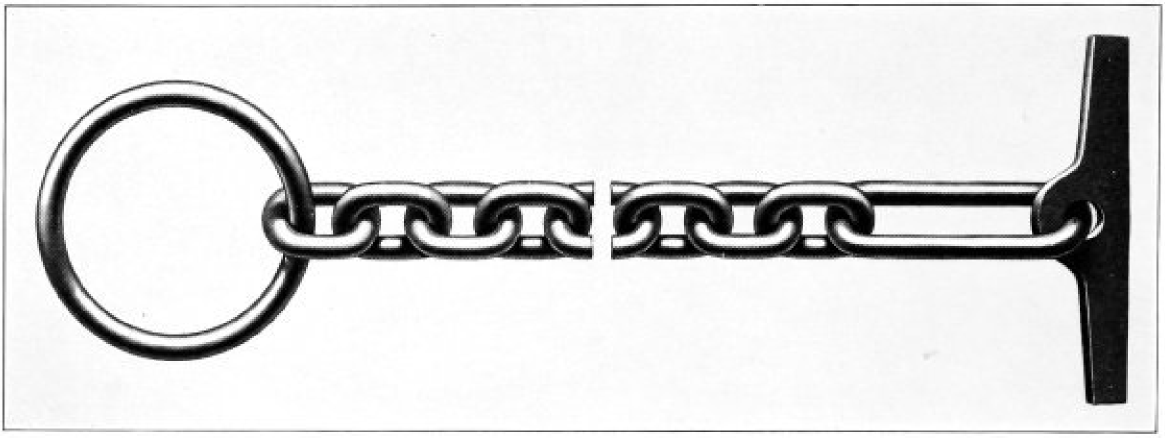
Style "C"

Style "C" Chains are furnished with a Sheared Toggle on each end, and in any size and length required.

Specifications of Toggles and Rings shown in table on page 61.

Regularly supplied Blacked.

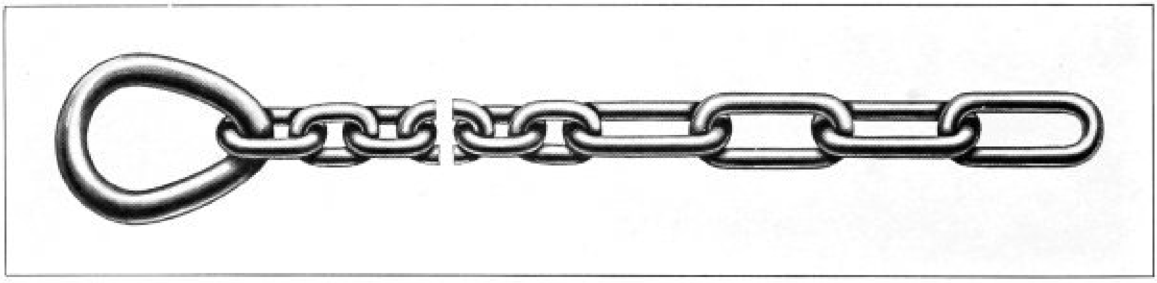
Boom or Rafting Chains

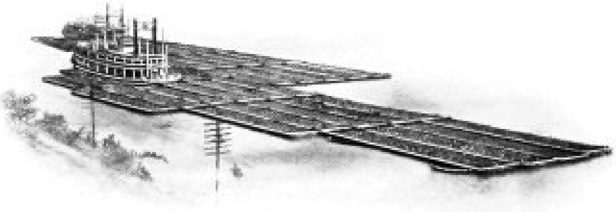


Style "D," Pacific Coast Pattern

Used to connect logs or timbers together in forming a boom for the enclosure of a drive of logs. Made from any size of material and any length required, with Ring on one end and a long Link and Forged Toggle on other end. Specifications of Toggles and Rings shown in table on page 61. Regularly supplied Blacked.

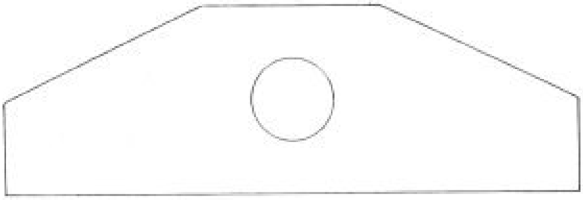
Tow Chains for River Navigation





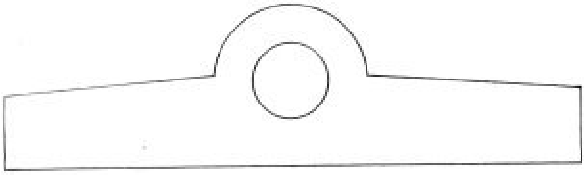
Furnished with Pear-shaped Link on one end. Half short and half long links, as per illustration. Made in any size and length required. Steel chain supplied unless otherwise ordered. Regularly supplied Blacked.

Sheared Toggles



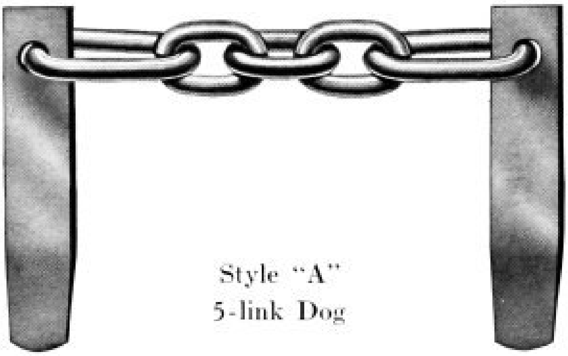
Toggle No.	Size Chain on which used	Toggle Dimensions — Inches	Approximate Weight Each Pounds	Style "B" Ring — Inches Inside Diameter
211	7/16	6 x 2 x 1/2	1 1/4	5/8 x 3
212	1/2	7 x 2 x 1/2	1 1/2	5/8 x 3 1/4
213	5/8	8 x 2 1/4 x 5/8	2 1/4	3/4 x 4
214	3/4	9 x 2 1/2 x 3/4	3 5/8	7/8 x 4 1/2
215	7/8	10 x 2 3/4 x 3/4	4 1/2	1 x 5

Forged Toggles



Toggle No.	Size Chain on which used	Toggle Dimensions — Inches	Approximate Weight Each Pounds	Style "D" Ring — Inches Inside Diameter
221	5/8	10 x 1 x 5/8	2 1/8	3/4 x 6
222	3/4	11 x 1 1/8 x 3/4	3 1/8	7/8 x 6
223	7/8	12 x 1 1/4 x 7/8	4 3/8	1 x 6
224	1	12 x 1 1/2 x 1	6	1 1/8 x 6

Chain Dogs

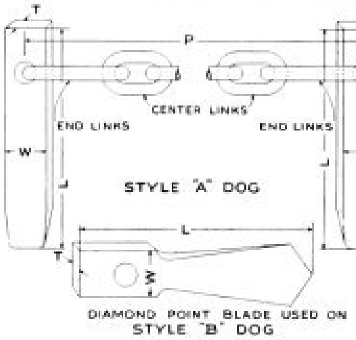

Style "A"
5-link Dog

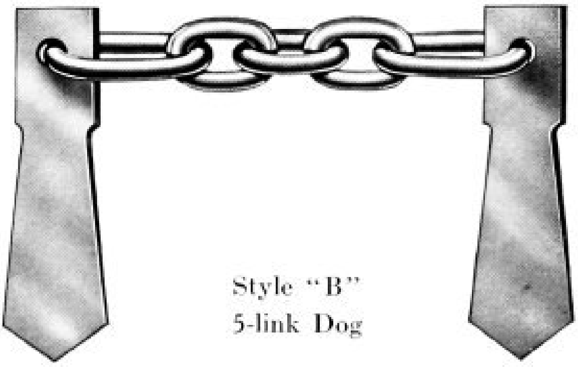
Commonly used by lumbermen in fastening or securing one log to another.

All Dogs are made from high-grade material, and the blades carefully tapered to permit them being easily driven into the hardest lumber.

Regularly made in sizes and lengths as shown in table below. Special sizes will be furnished to specifications.

There should always be an odd number of links between blades. This is essential in order that the blades will hang in alignment with each other.




Style "B"
5-link Dog

Regularly supplied Self-Colored, with blades cold-punched. Hot-punched blades can be supplied if required.

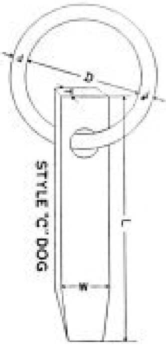
Standard Sizes and Lengths

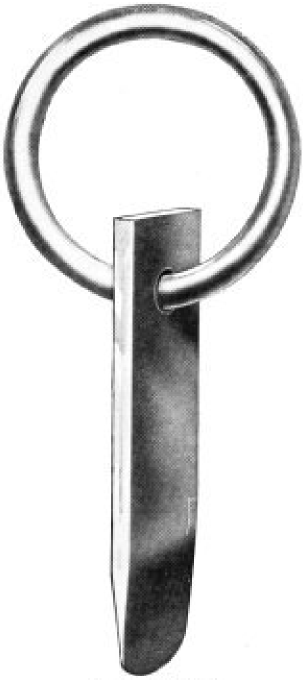
Trade Size	Material — Inches Center Links	Material — Inches End Links	Size Blades T x W Inches	Approximate Length L Inches	Distance Between Blades P Inches	Approx. Weight per 100 Dogs Pounds
$\frac{5}{16}$ — 3 Links*	$\frac{11}{32}$	$\frac{3}{8}$	$\frac{3}{8}$ x $1\frac{1}{8}$	6 to $6\frac{1}{2}$	6	180
$\frac{5}{16}$ — 5 Links*	$\frac{11}{32}$	$\frac{3}{8}$	$\frac{3}{8}$ x $1\frac{1}{8}$	6 to $6\frac{1}{2}$	$8\frac{3}{4}$	200
$\frac{5}{16}$ — 7 Links*	$\frac{11}{32}$	$\frac{3}{8}$	$\frac{3}{8}$ x $1\frac{1}{8}$	6 to $6\frac{1}{2}$	$11\frac{1}{2}$	225
$\frac{5}{16}$ — 9 Links*	$\frac{11}{32}$	$\frac{3}{8}$	$\frac{3}{8}$ x $1\frac{1}{8}$	6 to $6\frac{1}{2}$	$14\frac{1}{4}$	250
$\frac{3}{8}$ — 5 Links*	$\frac{13}{32}$	$\frac{7}{16}$	$\frac{3}{8}$ x $1\frac{1}{4}$	6 to $6\frac{1}{2}$	$8\frac{7}{8}$	260
$\frac{3}{8}$ — 7 Links*	$\frac{13}{32}$	$\frac{7}{16}$	$\frac{3}{8}$ x $1\frac{1}{4}$	6 to $6\frac{1}{2}$	$11\frac{1}{4}$	295
$\frac{3}{8}$ — 9 Links*	$\frac{13}{32}$	$\frac{7}{16}$	$\frac{3}{8}$ x $1\frac{1}{4}$	6 to $6\frac{1}{2}$	$13\frac{5}{8}$	330

* Indicates total number of links, including center and end links.

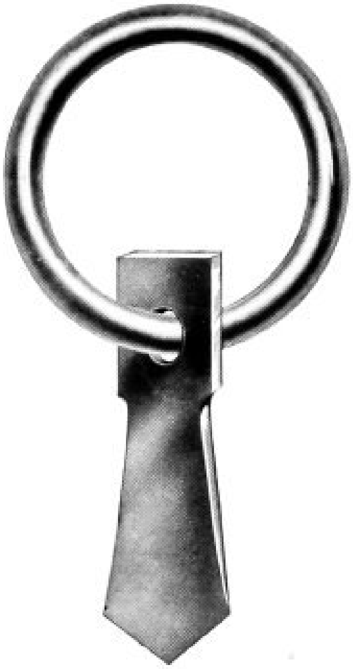
Ring Dogs

Used by lumbermen for practically the same purpose as Chain Dogs shown on the preceding page. These Dogs can be easily driven into any grade timber, and by stringing a Boom Chain, as illustrated on page 58, through the rings, the logs can be securely bound together for Rafting or Booming purposes.

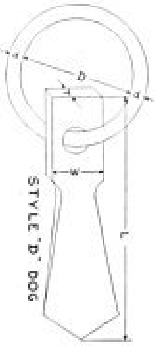




Style "C"
Plain Point Blade



Style "D"
Flared Diamond Point Blade



Standard Sizes

Size Blades—Inches T x W	Approximate Length Inches—L	Size Ring—Inches d x D	Approximate Weight per 100 Dogs—Pounds
3/8 x 1 1/4	6 to 6 1/2	3/8 x 3	110
3/8 x 1 1/2	6 to 6 1/2	3/8 x 3	125
3/8 x 1 1/2	6 to 6 1/2	1/2 x 3	150
3/8 x 2	6 to 6 1/2	1/2 x 3	175
1/2 x 1 1/2	6 to 6 1/2	1/2 x 3	175
1/2 x 2	6 to 6 1/2	3/8 x 3	190

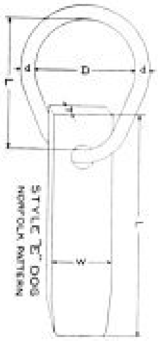
The sizes here shown are standard and those generally used, but any other size of Blade or Ring can be furnished.

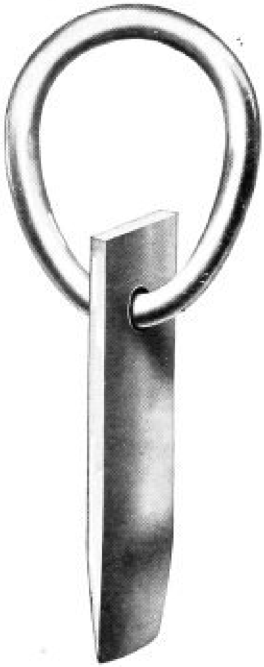
All orders and inquiries should indicate the style, length, width and thickness of the Blades, as well as the size and inside diameter of the Rings.

Regularly supplied Self-Colored, with cold-punched blades. Hot-punched blades can be supplied if required.

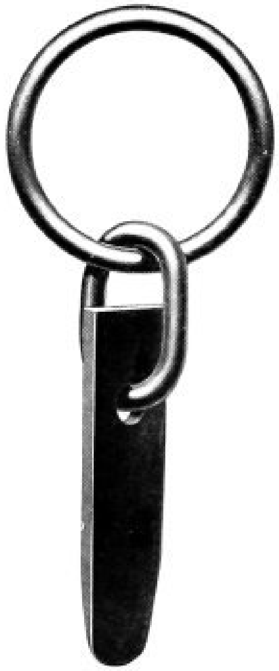
Ring Dogs

Used by lumbermen for practically the same purpose as Chain Dogs shown on page 62. These Dogs can be easily driven into any grade timber, and by stringing a Boom Chain, as illustrated on page 58, through the rings, the logs can be securely bound together for Rafting or Booming purposes.

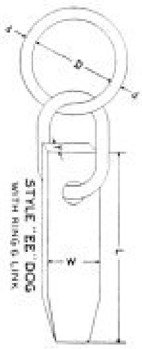




Style "E"
Norfolk Pattern



Style "EE"
With Ring and Link



Standard Sizes

Style "E" Dog Norfolk Pattern				Style "EE" Dog With Ring and Link				
Size Blades Inches T x W	Approximate Length Inches L	Size Ring Inches d x D x L	Approximate Weight per 100 Dogs Pounds	Size Blades Inches T x W	Approximate Length Inches L	Size Ring Inches d x D	Connecting Link or Ring Inches Inside	Approximate Weight per 100 Dogs Pounds
⅜ x 2	5½	7/16 x 3 x 4	170	5/16 x 1¼	5	⅜ x 3¼	⅜ x 2 ring	120
½ x 2	6	9/16 x 3 x 4	245	⅜ x 1⅛	5	⅜ x 5	⅜ x 1¾ x 1 link	125
½ x 2	7	9/16 x 3 x 4	270	⅜ x 1¼	5½	½ x 3	½ x 1¾ ring	160

The sizes here shown are standard and those generally used, but any other size of Blade or Ring can be furnished.

All orders and inquiries should indicate the style, length, width and thickness of the Blade, as well as the size and inside diameter of the Ring.

Regularly supplied Self-Colored, with blades cold-punched. Hot-punched blades can be supplied if required.

Ring Dogs

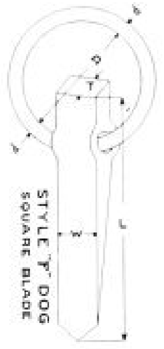
Style "F"
Square Blade

Style "F" Square Ring Dogs are a favorite among lumbermen. They are carefully tapered and can be easily driven into the hardest wood. Blades are hot-punched.

Style "F" Dog

Square Blade

Size Blades Inches T x W	Approximate Length—Inches L	Size Ring Inches d x D	Approximate Weight per 100 Dogs—Pounds
¾ x ¾	6 to 6½	½ x 3	125
⅞ x ⅞	6 to 6½	½ x 3	150
1 x 1	6 to 6½	½ x 3	175



Style "G"
Solid Eye

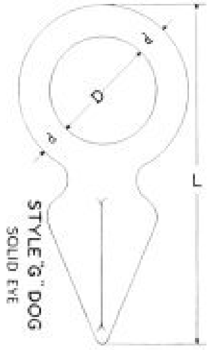
Style "G" Solid Eye Dogs are exceptionally strong and durable. They are drop-forged and have a well-tapered arrow point.

Stock sizes are as follows. Regularly supplied Blacked.

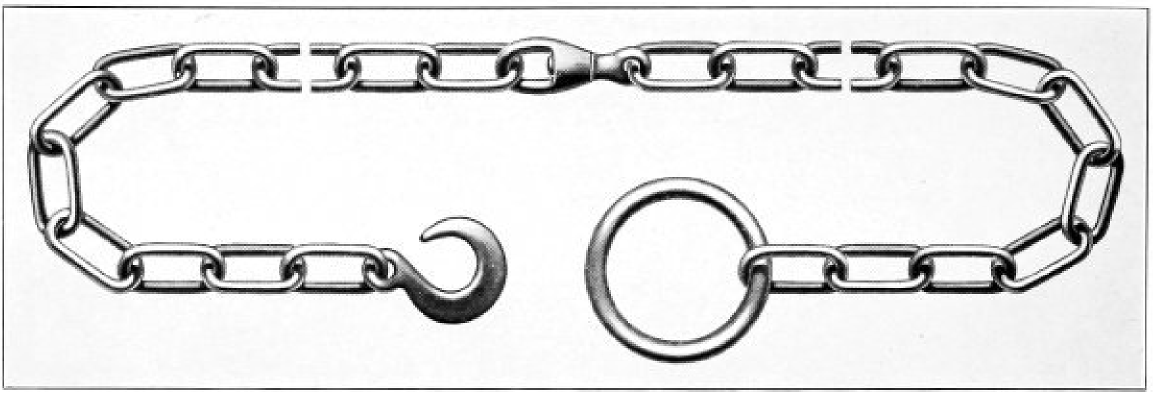
Style "G" Dog

Solid Eye

Material in Eye – Inches d	Hole in Eye Inches D	Length Inches L	Approximate Weight per 100 Dogs—Pounds
½	1⅝	5½	60
⅝	2	6	110



Long-Link Log or Ox Chains



Style No. 100

A special long-link chain with **Slip Hook** on one end, **Swivel** in center, and **Ring** on other end. Made in any size and length required. Furnished **Self-Colored, Polished** or **Blacked.** Orders and inquiries should indicate the size, length and finish wanted.

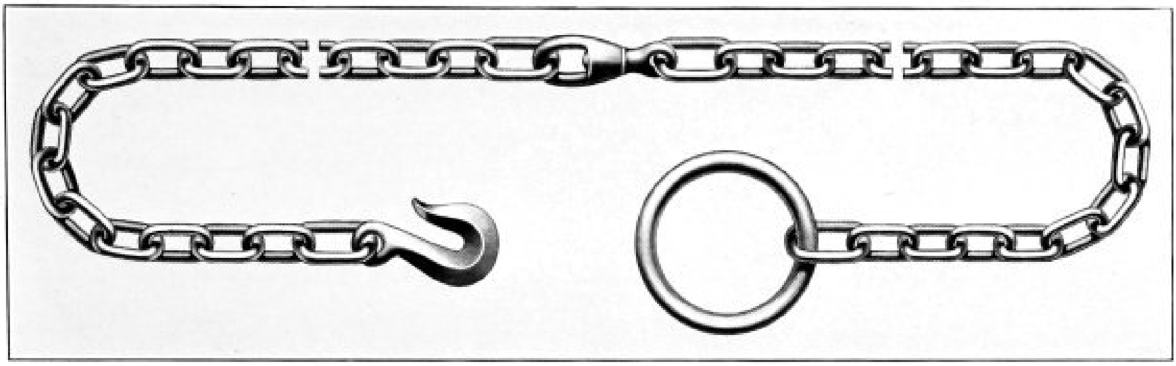
No. 100 Log Chain

Trade Size	Size Material Inches	Inside Dimensions of Links	Slip Hook Number	Swivel Number	Ring	
					Material Inches	Inside Diameter Inches
1/4	9/32	7/8 x 2½ inches	21	2520-C	13/32	2½
5/16	11/32	7/8 x 2½ inches	22	2520-E	17/32	3
3/8	13/32	7/8 x 2½ inches	23	2525-C	21/32	4
7/16	15/32	3/4 x 3 inches	24	2525-D	25/32	4
1/2	17/32	3/4 x 3 inches	25	2525-E	29/32	4
5/8	21/32	1 x 3½ inches	26	2525-F	33/32	4

Table of Slip Hooks on page 78
Table of Swivels on page 81
Table of Log Chain Weights on page 68

Log or Binding Chains

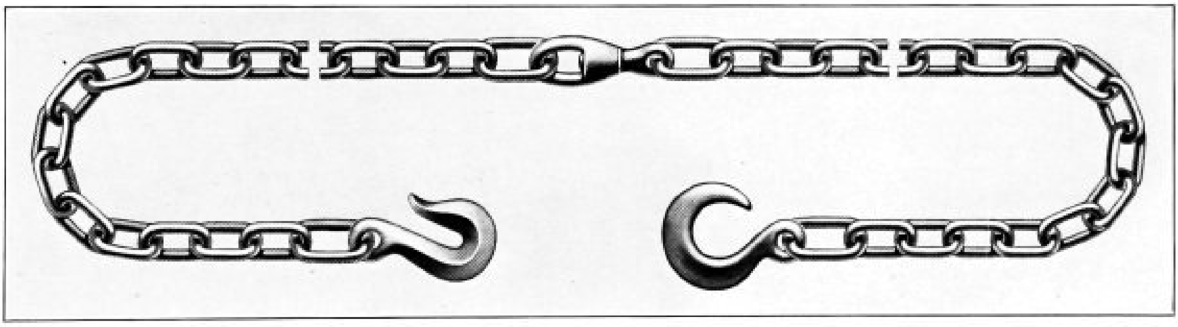
Commonly used as a general utility chain



Style No. 110

Made with Ring on one end, Swivel in center, and Grab Hook on other end.

Trade Size	Size Material Inches	Inside Dimensions of Links Inches	Grab Hook Number	Swivel Number	Ring	
					Material Inches	Inside Diameter Inches
1/4	9/32	1 x 1/2	41	2520-C	13/32	2 1/2
5/16	11/32	1 7/64 x 1/2	42	2520-E	17/32	3
3/8	13/32	1 15/64 x 5/8	43	2525-C	21/32	4
7/16	15/32	1 3/8 x 3/4	44	2525-D	25/32	4
1/2	17/32	1 1/2 x 13/16	45	2525-E	29/32	4
5/8	21/32	2 x 1 1/8	46	2525-F	33/32	4



Style No. 120

Grab Hook on one end, Swivel in center, and Slip Hook on other end.

Trade Size	Size Material Inches	Inside Dimensions of Links Inches	Slip Hook Number	Grab Hook Number	Swivel Number
1/4	9/32	1 x 1/2	21	41	2520-C
5/16	11/32	1 7/64 x 1/2	22	42	2520-E
3/8	13/32	1 15/64 x 5/8	23	43	2525-C
7/16	15/32	1 3/8 x 3/4	24	44	2525-D
1/2	17/32	1 1/2 x 13/16	25	45	2525-E
5/8	21/32	2 x 1 1/8	26	46	2525-F

Furnished Self-Colored, Polished or Blacked.
Table of Log Chain Weights on page 68. Table of Slip Hooks on page 78. Table of Grab Hooks on page 79.
Table of Swivels on page 81.

Weights of Log Chains

(Each Complete)

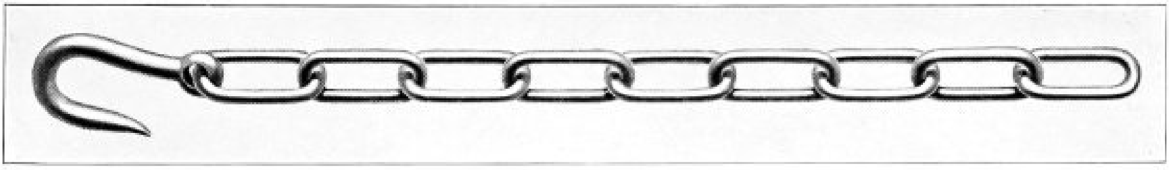
Chain Size	10 Feet Weight in Pounds	12 Feet Weight in Pounds	14 Feet Weight in Pounds	16 Feet Weight in Pounds
No. 100				
1/4	7	8	9	10
5/16	10	12	14	15
3/8	15	17	20	22
7/16	19	22	26	29
1/2	26	30	35	39
5/8	38	45	51	58
No. 110				
1/4	8	9	11	12
5/16	11	13	15	17
3/8	17	20	23	26
7/16	23	27	31	35
1/2	29	34	40	45
5/8	39	46	52	59
No. 120				
1/4	8	9	10	12
5/16	11	13	15	17
3/8	17	20	23	26
7/16	22	26	30	34
1/2	28	33	39	44
5/8	38	44	51	58

Weights are approximate.

Wagon Chains

On this and the following pages various types of Wagon Chains are illustrated, made to a standard approved by the leading wagon manufacturers.

Stay Chains



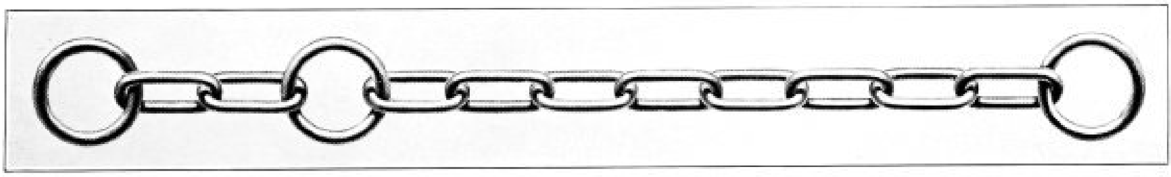
Made in straight link only. Standard lengths, 24 and 26 inches. Can be supplied in any length required.

Weights and Dimensions

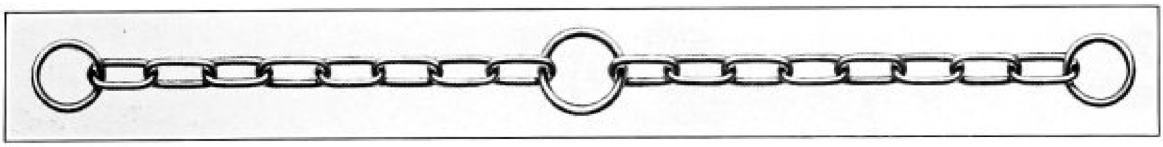
Chain Size Inches	Size Material in Chain Inches	Size Material in Hook Inches	Approximate Weight per 100 pairs 24-inch	Approximate Weight per 100 pairs 26-inch
1/4	9/32	9/16	300	320
5/16	11/32	5/8	455	465
3/8	13/32	5/8	555	610

Furnished Self-Colored, Blacked or Bright, as ordered.

Tongue or Pole Chains



Regular Pattern



Texas Pattern

Made in straight link only. Standard lengths. Regular Pattern, 33 inches; Texas Pattern, 48 inches. Can be supplied in any length required.

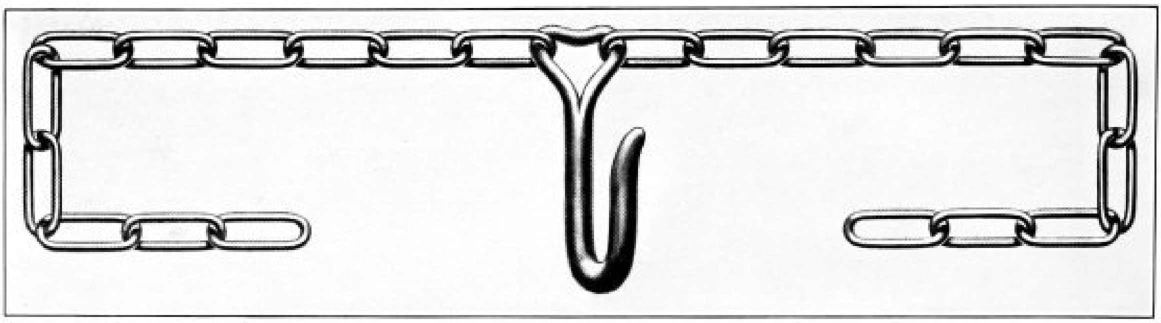
Weights and Dimensions

Chain Size Inches	Size Material Inches	Regular Pattern			Texas Pattern			
		Length Inches	Size Ring Inches	Approximate Weight per 100 Pairs	Length Inches	Size Rings—Inches		Approximate Weight per 100 Pairs
						End	Center	
1/4	9/32	33	13/32 x 2½	460	48	13/32 x 2½	15/32 x 3½	810
5/16	11/32	33	13/32 x 2½	570				
3/8	13/32	33	15/32 x 2½	805				

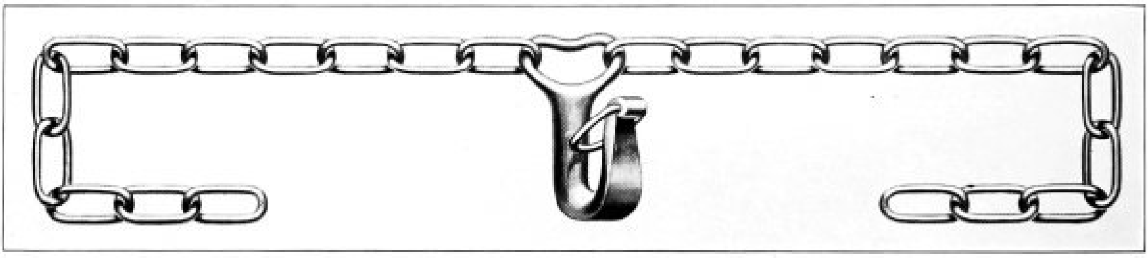
Furnished Self-Colored, Blacked or Bright, as ordered.

Wagon Chains

Stretcher Chains



Regular Pattern



California Pattern

This style is furnished with a locking link or safety link on hook to prevent hook from slipping out.

Stretcher Chains are used with Wagon Fifth or Rolling Chains, illustrated on page 72, to hitch teams in tandem style.

Made in straight link only. Standard length, 60 inches. Can be supplied in any length required.

Weights and Dimensions

Chain Size Inches	Size Material Inches	Length Over All Inches	Approximate Weight per 100 Chains Pounds
$\frac{1}{4}$	$\frac{9}{32}$	60	530
$\frac{5}{16}$	$\frac{11}{32}$	60	675
$\frac{3}{8}$	$\frac{13}{32}$	60	885

Furnished Self-Colored, Blacked or Bright, as ordered.

Wagon Chains

Lock Chains

Used for locking wagon wheel when going down a steep grade. Regularly made twist link so that it will grip the wheel more closely. Standard length, 42 inches. Can be furnished in any length required.

Dimensions and Weights

Chain Size Inches	Size Material Inches	Length Inches	Approximate Weight per 100 Chains Pounds
$\frac{1}{4}$	$\frac{9}{32}$	42	300
$\frac{5}{16}$	$\frac{11}{32}$	42	395
$\frac{3}{8}$	$\frac{13}{32}$	42	590

Furnished Self-Colored, Blacked or Bright, as ordered.

Anti-Spreader Chains

Used to prevent spreading of wagon box when loaded. Standard lengths, 38-inch for narrow track and 42-inch for wide track. Eyebolts $\frac{5}{16}$-inch x $1\frac{3}{4}$-inch under eye. Special length eyebolts furnished if required.

Dimensions and Weights

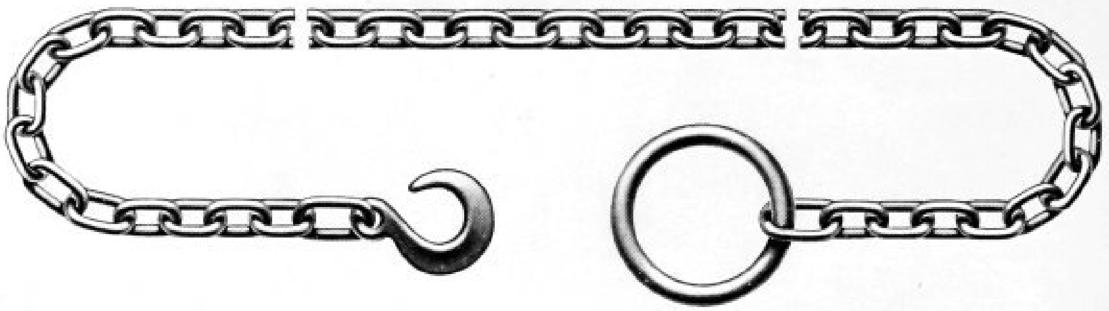
Size Chain	Gauge No. (W. & M.)	Length Inches	Approximate Weight per 100 Chains Pounds
2/0	6	38	105
2/0	6	42	115
3/0	5	38	120
3/0	5	42	130

Furnished Self-Colored, Blacked or Bright, as ordered.

Weldless Anti-Spreader Chains illustrated on page 213.

Wagon Chains

Fifth Chains



Used with Stretcher Chains, illustrated on page 70, to hitch teams in tandem style. The chain is fastened to the axle, passed between the first two horses, and is hitched with the use of a Stretcher Chain to the doubletree of the next team ahead.

Also used on road work, drag harrows, scrapers, etc.

Made in straight link only.

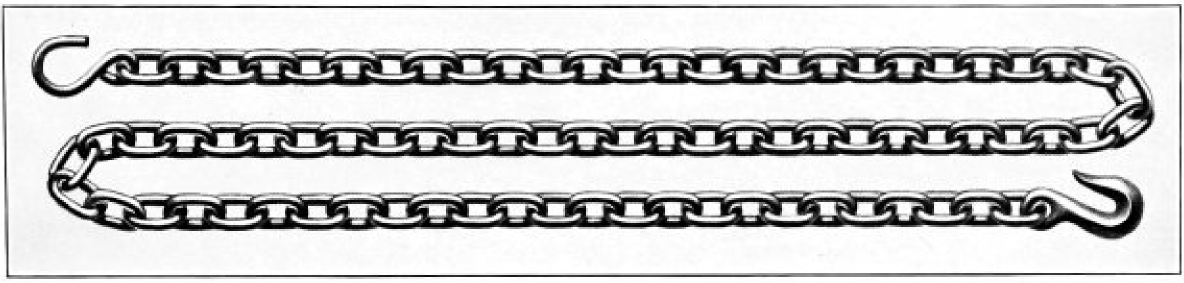
Weights and Dimensions

Chain Size Inches	Size Material Inches	Approximate Weight per 100 Chains 10 Feet—Pounds	Approximate Weight per 100 Chains 12 Feet—Pounds
$\frac{1}{4}$	$\frac{9}{32}$	780	985
$\frac{5}{16}$	$\frac{11}{32}$	1175	1375
$\frac{3}{8}$	$\frac{13}{32}$	1650	2150

Furnished Self-Colored, Blacked or Bright, as ordered.

Tail-Board or End-Gate Chains

Used on Wagon or Truck Bodies



Straight Link

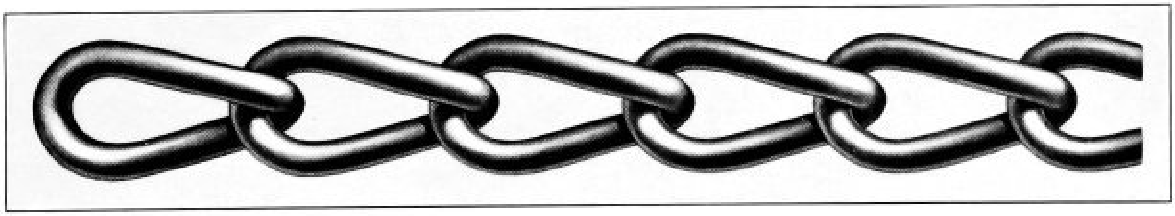
For supporting the tail-board or end-gate when lowered to the level of the body, also for stake supports on flat wagons or trucks. Regular sizes $\frac{1}{4}$-inch ($\frac{9}{32}$) to $\frac{1}{2}$-inch ($\frac{17}{32}$) inclusive, and any length required.

Can also be furnished with a Claw Grab Hook instead of hook illustrated.

Furnished Self-Colored, Blacked or Bright, as ordered.

Tail-Board or End-Gate Chain

Without Attachments



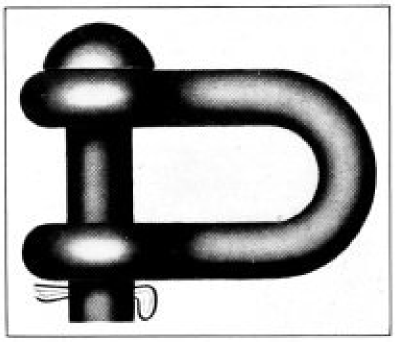
Twist Link

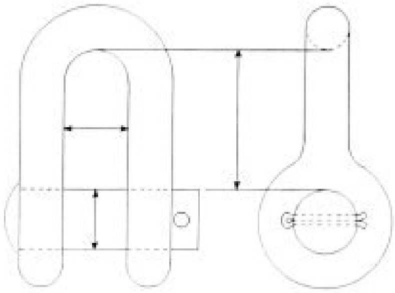
Wide Twist Link Tail-Board or End-Gate Chain is supplied in continuous lengths as per specifications in the following table:

Chain Size Inches	Size Material Inches	Inside Dimensions of Links Inches	Approximate Weight per 100 Feet Pounds
$\frac{1}{4}$	$\frac{9}{32}$	$1\frac{11}{16} \times \frac{1}{2}$	65
$\frac{5}{16}$	$\frac{11}{32}$	$1\frac{13}{16} \times \frac{9}{16}$	100
$\frac{3}{8}$	$\frac{13}{32}$	$1\frac{15}{16} \times \frac{11}{16}$	145

Furnished Self-Colored, Blacked or Bright, as ordered.

Round Pin Chain Shackles



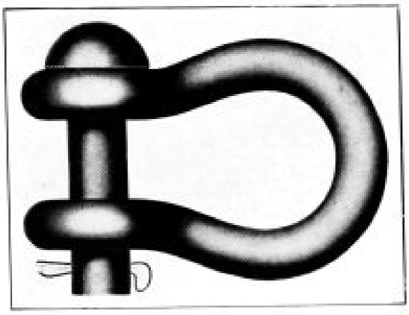


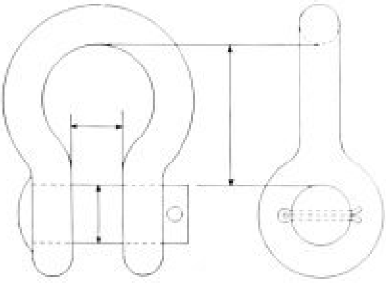
Approximate Dimensions and Weights

Size Material Inches	Inside Length Inches	Inside Width Inches	Diameter Pin Inches	Weight per 100 Shackles Pounds
1/4	13/16	7/16	5/16	12
5/16	1	1/2	3/8	20
3/8	1 1/4	5/8	7/16	30
7/16	1 7/16	3/4	1/2	45
1/2	1 5/8	13/16	9/16	64
9/16	1 7/8	15/16	5/8	99
5/8	2 1/8	1 1/8	3/4	133
3/4	2 1/2	1 1/4	7/8	215
7/8	2 7/8	1 7/16	1	340
1	3 1/4	1 5/8	1 1/8	479
1 1/8	3 5/8	1 13/16	1 1/4	671
1 1/4	4	2	1 3/8	849
1 3/8	4 1/2	2 1/4	1 1/2	1141
1 1/2	4 7/8	2 7/16	1 5/8	1382
1 5/8	5 1/4	2 5/8	1 3/4	1665
1 3/4	5 3/4	2 7/8	1 7/8	1970
2	6 1/2	3 1/4	2 1/8	2600

Also supplied to the above dimensions with Oval Pins.
Furnished Self-Colored, Blacked, or Galvanized, as ordered.

Round Pin Anchor Shackles





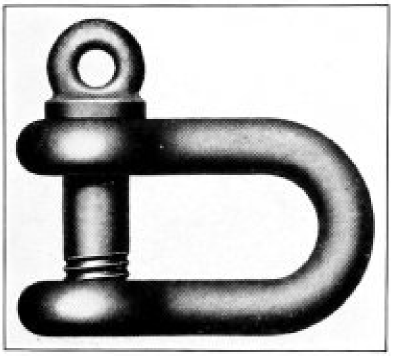
Approximate Dimensions and Weights

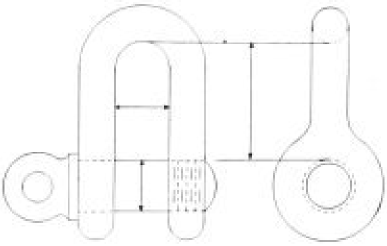
Size Material Inches	Inside Length Inches	Width Between Eyes Inches	Diameter Pin Inches	Weight per 100 Shackles Pounds
1/4	1	7/16	5/16	13
5/16	1 3/16	1/2	3/8	21
3/8	1 7/16	5/8	7/16	32
7/16	1 5/8	3/4	1/2	49
1/2	1 13/16	13/16	9/16	67
9/16	2 1/8	15/16	5/8	102
5/8	2 3/8	1 1/8	3/4	136
3/4	2 3/4	1 1/4	7/8	220
7/8	3 1/8	1 7/16	1	353
1	3 1/2	1 5/8	1 1/8	515
1 1/8	3 7/8	1 13/16	1 1/4	731
1 1/4	4 1/4	2	1 3/8	897
1 3/8	4 3/4	2 1/4	1 1/2	1217
1 1/2	5 1/4	2 7/16	1 5/8	1455
1 5/8	5 3/4	2 5/8	1 3/4	1780
1 3/4	6 1/4	2 7/8	1 7/8	2120
2	7	3 1/4	2 1/8	2800

Also supplied to the above dimensions with Oval Pins.

Furnished Self-Colored, Blacked, or Galvanized, as ordered.

Screw Pin Chain Shackles



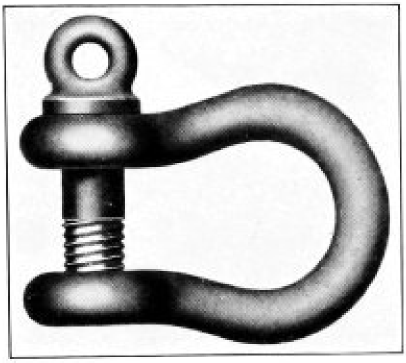


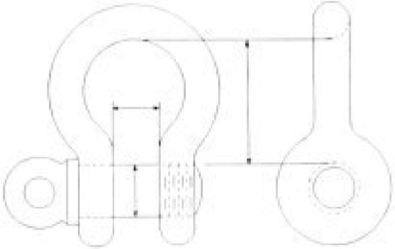
Approximate Dimensions and Weights.

Size Material Inches	Inside Length Inches	Inside Width Inches	Diameter Pin Inches	Weight per 100 Shackles Pounds
1/4	13/16	7/16	5/16	12
5/16	1	1/2	3/8	20
3/8	1 1/4	5/8	7/16	30
7/16	1 7/16	3/4	1/2	45
1/2	1 5/8	13/16	9/16	64
9/16	1 7/8	15/16	5/8	99
5/8	2 1/8	1 1/8	3/4	133
3/4	2 1/2	1 1/4	7/8	215
7/8	2 7/8	1 7/16	1	340
1	3 1/4	1 5/8	1 1/8	479
1 1/8	3 5/8	1 13/16	1 1/4	671
1 1/4	4	2	1 3/8	849
1 3/8	4 1/2	2 1/4	1 1/2	1141
1 1/2	4 7/8	2 7/16	1 5/8	1382
1 5/8	5 1/4	2 5/8	1 3/4	1665
1 3/4	5 3/4	2 7/8	1 7/8	1970
2	6 1/2	3 1/4	2 1/8	2600

Furnished Self-Colored, Blacked, or Galvanized, as ordered.

Screw Pin Anchor Shackles





Approximate Dimensions and Weights.

Size Material Inches	Inside Length Inches	Width Between Eyes Inches	Diameter Pin Inches	Weight per 100 Shackles Pounds
1/4	1	7/16	5/16	13
5/16	1 3/16	1/2	3/8	21
3/8	1 7/16	5/8	7/16	32
7/16	1 5/8	3/4	1/2	49
1/2	1 13/16	13/16	9/16	67
9/16	2 1/8	15/16	5/8	102
5/8	2 3/8	1 1/8	3/4	136
3/4	2 3/4	1 1/4	7/8	220
7/8	3 1/8	1 7/16	1	353
1	3 1/2	1 5/8	1 1/8	515
1 1/8	3 7/8	1 13/16	1 1/4	731
1 1/4	4 1/4	2	1 3/8	897
1 3/8	4 3/4	2 1/4	1 1/2	1217
1 1/2	5 1/4	2 7/16	1 5/8	1455
1 5/8	5 3/4	2 5/8	1 3/4	1780
1 3/4	6 1/4	2 7/8	1 7/8	2120
2	7	3 1/4	2 1/8	2800

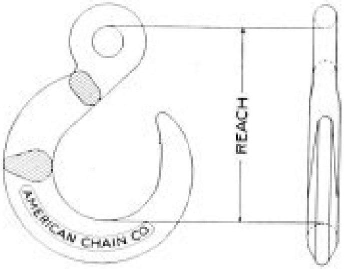
Furnished Self-Colored, Blacked, or Galvanized, as ordered.

Slip Hooks

These Hooks are drop-forged, and shaped to permit the chain to slip easily through the loop.

Orders and inquiries should state the Hook number or the size of chain on which they are to be used.

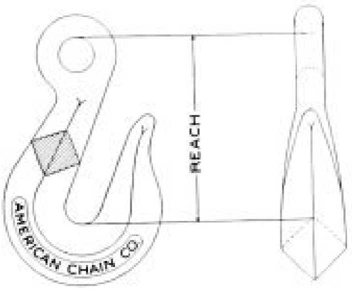
Furnished Self-Colored unless otherwise specified.



Hook No.	Chain Size Inches	Reach Inches	Hole in Eye Inches	Approximate Weight per 100 Hooks—Pounds
21	1/4	2 1/4	3/8	20
22	5/16	2 5/8	7/16	33
23	3/8	3 1/16	1/2	61
24	7/16	3 3/8	9/16	90
25	1/2	3 3/4	5/8	134
26	5/8	4 7/16	3/4	250
27	3/4	5	7/8	400

Grab Hooks

These Hooks are used on Log and other general utility chains. They are drop-forged and so shaped that when hooked over a link of the chain they will not slip.



Orders and inquiries should state the Hook number or the size of chain on which they are to be used.

Furnished Self-Colored unless otherwise specified.

Hook No.	Chain Size Inches	Reach Inches	Hole in Eye Inches	Approximate Weight per 100 Hooks—Pounds
41	1/4	2	5/16	28
42	5/16	2 1/2	3/8	50
43	3/8	2 13/16	7/16	90
44	7/16	3 5/16	1/2	124
45	1/2	3 15/16	5/8	170
46	5/8	4 11/16	3/4	350
47	3/4	5 13/16	1	660
48	7/8	6 7/8	1 1/8	1200
49	1	7 3/4	1 1/2	1975

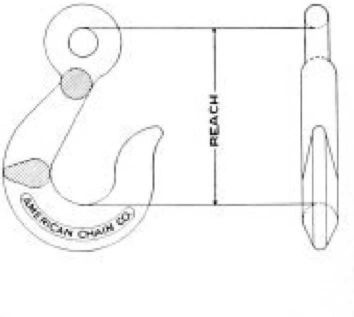
Sling Chain Hooks

These Hooks are for use in connection with our **H.B.** and **Ajax** Grades of chain described on pages 18 to 23 inclusive.

When ordering, indicate the Hook number or the size chain on which it is to be used.

Furnished Self-Colored unless otherwise specified.

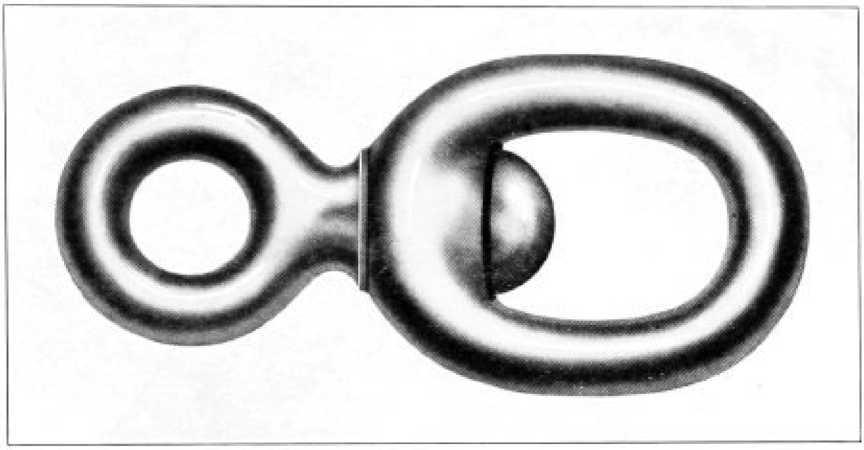
Hook No.	Chain Size Inches	Reach Inches	Hole in Eye Inches	Approximate Weight each Pounds
61	½	5 7/16	⅞	4
62	⅝	6 ⅝	1¼	8
63	¾	9 ¼	1½	16
64	⅞	11 ⅛	1⅝	28
65	1	11 ⅞	1¾	39
66	1⅛	13 ⅝	2	51
67	1¼	15	2¼	68
68	1⅜	15 ⅜	2⅜	92
69	1½	16 ¾	2½	105



Larger sizes than those shown in table can be furnished.

Malleable Swivels

For use on Log Chains, etc. Made from malleable iron, strong and free of action.



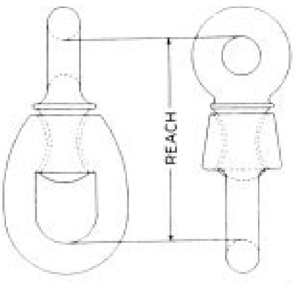
For use on the following size chains:

Pattern No.	Size Chain Inches	Reach — Inches	Hole in Eye Inches	Approximate Weight per 100 Swivels Pounds
2520–A	$\frac{1}{8}$	$1\frac{13}{16}$	$\frac{3}{8}$	11
2520–B	$\frac{3}{16}$	2	$\frac{3}{8}$	16
2520–C	$\frac{1}{4}$	$2\frac{3}{16}$	$\frac{7}{16}$	21
2520–E	$\frac{5}{16}$	$2\frac{1}{2}$	$\frac{7}{16}$	32
2525–C	$\frac{3}{8}$	$3\frac{3}{8}$	$\frac{1}{2}$	61
2525–D	$\frac{7}{16}$	$3\frac{1}{2}$	$\frac{9}{16}$	78
2525–E	$\frac{1}{2}$	$3\frac{5}{8}$	$\frac{13}{16}$	93
2525–F	$\frac{9}{16}$	$4\frac{5}{8}$	$\frac{15}{16}$	168
2525–F	$\frac{5}{8}$	$4\frac{5}{8}$	$\frac{15}{16}$	168
2525–G	$\frac{3}{4}$	6	1	268

When ordering, it is only necessary to give the Pattern number, or the size chain on which they are to be used.

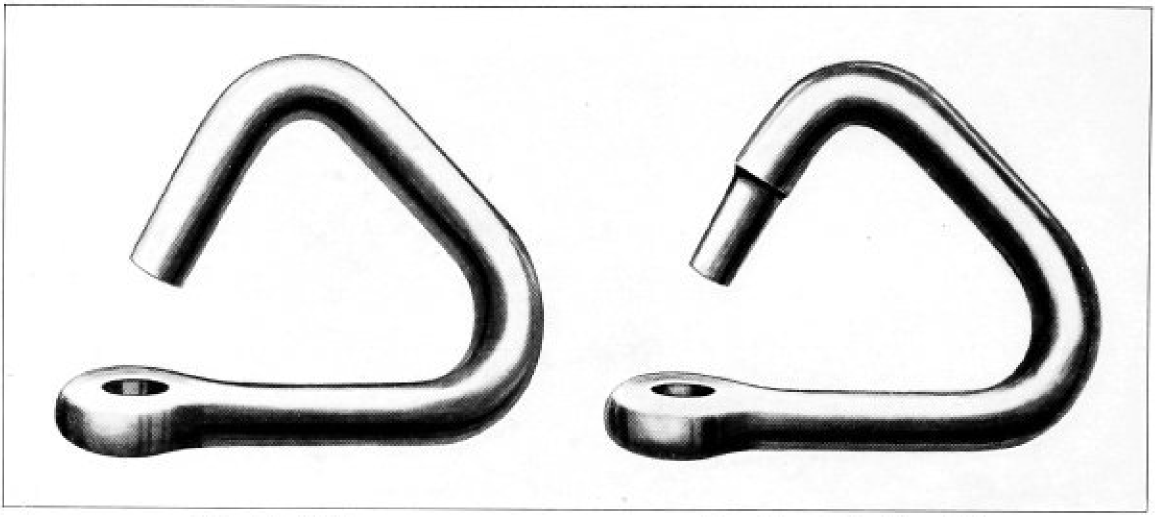
Furnished natural finish unless otherwise ordered.

Larger sizes for Stud Link Chain shown on page 34.



Cold Shuts

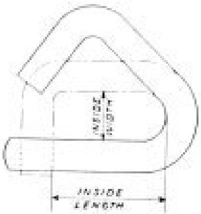
For Connecting and Repairing Coil Chain



No. 1, Plain

No. 2, with Shoulder

May be closed and riveted down cold. Made in all sizes from 3/16 inch to 1 1/2 inches inclusive. Furnished Self-Colored unless otherwise ordered.



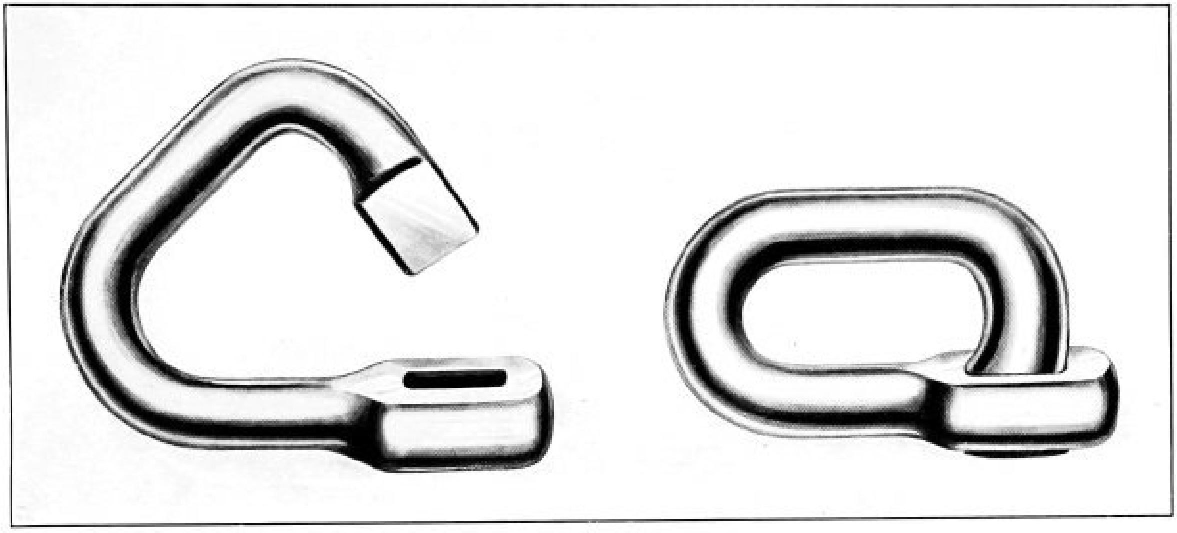
Approximate Dimensions and Weights

Nos. 1 and 2

Size Inches	Inside Length Inches	Inside Width Inches	Approximate Weight per 100 Pieces Pounds	Size Inches	Inside Length Inches	Inside Width Inches	Approximate Weight per 100 Pieces Pounds
3/16	1 1/8	3/8	3 3/4	3/4	2 3/8	1	129
1/4	1 1/8	7/16	6 1/2	7/8	2 3/4	1 1/4	225
5/16	1 1/4	1/2	11	1	3	1 3/8	348
3/8	1 3/8	5/8	18	1 1/8	3 1/2	1 5/8	460
7/16	1 1/2	11/16	27	1 1/4	3 3/4	1 3/4	653
1/2	1 5/8	3/4	42	1 3/8	4 1/8	1 7/8	837
9/16	1 7/8	13/16	58	1 1/2	4 1/2	1 7/8	1050
5/8	2	7/8	74				

Cold Shuts

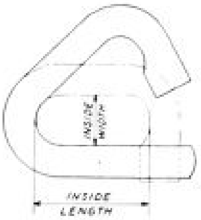
For Connecting and Repairing Conveyor and Dredge Chains



No. 3

Made in sizes from $\frac{1}{2}$ inch to 2 inches inclusive. When closed and riveted, will work smoothly on sprocket or sheave wheels.

When ordering, state size chain for which intended, giving the inside length and width required when closed. Furnished Self-Colored unless otherwise ordered.



Approximate Dimensions and Weights

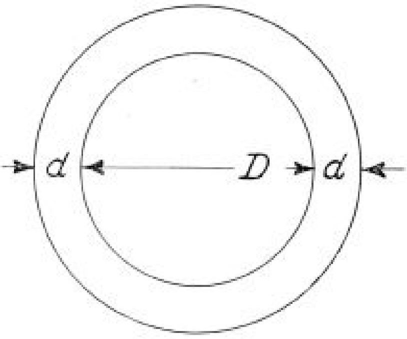
No. 3

Size Inches	Inside Length Inches	Inside Width Inches	Approximate Weight per 100 Pieces. Pounds	Size Inches	Inside Length Inches	Inside Width Inches	Approximate Weight per 100 Pieces. Pounds
$\frac{1}{2}$	$1\frac{5}{8}$	$\frac{3}{4}$	37	$1\frac{1}{4}$	$3\frac{3}{4}$	$1\frac{3}{4}$	525
$\frac{5}{8}$	2	$\frac{7}{8}$	70	$1\frac{3}{8}$	$4\frac{1}{8}$	$1\frac{7}{8}$	700
$\frac{3}{4}$	$2\frac{3}{8}$	1	117	$1\frac{1}{2}$	$4\frac{1}{2}$	$1\frac{7}{8}$	890
$\frac{7}{8}$	$2\frac{3}{4}$	$1\frac{1}{4}$	202	$1\frac{5}{8}$	$4\frac{3}{4}$	2	950
1	3	$1\frac{3}{8}$	267	$1\frac{3}{4}$	$5\frac{1}{4}$	$2\frac{1}{4}$	1225
$1\frac{1}{8}$	$3\frac{1}{2}$	$1\frac{5}{8}$	400	2	$6\frac{1}{4}$	$2\frac{3}{4}$	1875

Above are standard dimensions of Cold Shuts used on Dredge Chain. Can also be furnished to dimensions required for use on Conveyor Chain.

Welded Rings

Welded Rings, made to practically any dimensions, can be supplied. The following table shows standard sizes.



Weight of Rings

Trade Size Inches d x D	Approximate Weight per 100 Rings Pounds	Trade Size Inches d x D	Approximate Weight per 100 Rings Pounds	Trade Size Inches d x D	Approximate Weight per 100 Rings Pounds
$\frac{3}{16}$ x $1\frac{1}{4}$	3.85	$\frac{11}{32}$ x 2	20	$\frac{5}{8}$ x 4	140
$\frac{3}{16}$ x $1\frac{1}{2}$	4.45	$\frac{11}{32}$ x $2\frac{1}{2}$	24	$\frac{3}{4}$ x 3	162
$\frac{3}{16}$ x $1\frac{3}{4}$	5.05	$\frac{11}{32}$ x 3	28	$\frac{3}{4}$ x $3\frac{1}{2}$	183
$\frac{3}{16}$ x 2	5.75	$\frac{11}{32}$ x $3\frac{1}{2}$	32	$\frac{3}{4}$ x 4	204
$\frac{7}{32}$ x $1\frac{1}{4}$	5.00	$\frac{3}{8}$ x $1\frac{1}{2}$	19	$\frac{3}{4}$ x $4\frac{1}{2}$	225
$\frac{7}{32}$ x $1\frac{1}{2}$	5.75	$\frac{3}{8}$ x 2	24	$\frac{3}{4}$ x 6	275
$\frac{7}{32}$ x $1\frac{3}{4}$	6.60	$\frac{3}{8}$ x $2\frac{1}{2}$	29	$\frac{7}{8}$ x $3\frac{1}{2}$	253
$\frac{7}{32}$ x 2	7.50	$\frac{3}{8}$ x 3	34	$\frac{7}{8}$ x 4	282
$\frac{1}{4}$ x $1\frac{1}{4}$	6.72	$\frac{3}{8}$ x $3\frac{1}{2}$	38	$\frac{7}{8}$ x $4\frac{1}{2}$	310
$\frac{1}{4}$ x $1\frac{1}{2}$	7.80	$\frac{13}{32}$ x $1\frac{1}{2}$	23	$\frac{7}{8}$ x 5	339
$\frac{1}{4}$ x $1\frac{3}{4}$	9.00	$\frac{13}{32}$ x 2	28	$\frac{7}{8}$ x 6	375
$\frac{1}{4}$ x 2	10.00	$\frac{13}{32}$ x $2\frac{1}{4}$	31	1 x 4	360
$\frac{1}{4}$ x $2\frac{1}{2}$	12.25	$\frac{13}{32}$ x $2\frac{1}{2}$	34	1 x 5	440
$\frac{1}{4}$ x 3	14.35	$\frac{13}{32}$ x $3\frac{1}{4}$	43	1 x $5\frac{1}{2}$	470
$\frac{9}{32}$ x $1\frac{1}{4}$	8.75	$\frac{7}{16}$ x 2	33	1 x 6	500
$\frac{9}{32}$ x $1\frac{1}{2}$	10.00	$\frac{7}{16}$ x $2\frac{1}{2}$	40	$1\frac{1}{8}$ x 5	550
$\frac{9}{32}$ x $1\frac{3}{4}$	11.42	$\frac{7}{16}$ x 3	46	$1\frac{1}{8}$ x 6	650
$\frac{9}{32}$ x 2	12.75	$\frac{7}{16}$ x $3\frac{1}{2}$	53	$1\frac{3}{8}$ x 6	1000
$\frac{9}{32}$ x $2\frac{1}{2}$	15.50	$\frac{1}{2}$ x $2\frac{1}{2}$	53	$1\frac{5}{8}$ x $6\frac{1}{2}$	1600
$\frac{9}{32}$ x 3	18.35	$\frac{1}{2}$ x 3	61	$1\frac{3}{4}$ x 7	2000
$\frac{9}{32}$ x $3\frac{1}{2}$	21.15	$\frac{1}{2}$ x $3\frac{1}{2}$	70	$1\frac{7}{8}$ x 8	2500
$\frac{5}{16}$ x $1\frac{1}{2}$	12.56	$\frac{1}{2}$ x 4	79	$2\frac{1}{8}$ x 9	3600
$\frac{5}{16}$ x 2	16.00	$\frac{9}{16}$ x $2\frac{1}{2}$	77	$2\frac{1}{4}$ x 9	4000
$\frac{5}{16}$ x $2\frac{1}{2}$	19.42	$\frac{9}{16}$ x 3	91	$2\frac{1}{2}$ x 10	5500
$\frac{5}{16}$ x 3	22.88	$\frac{9}{16}$ x $3\frac{1}{2}$	110	$2\frac{5}{8}$ x 10	6300
$\frac{5}{16}$ x $3\frac{1}{4}$	24.50	$\frac{9}{16}$ x 4	113	$2\frac{3}{4}$ x 10	7000
$\frac{5}{16}$ x $3\frac{1}{2}$	26.32	$\frac{5}{8}$ x 3	110	3 x 12	9600
$\frac{11}{32}$ x $1\frac{1}{2}$	15.50	$\frac{5}{8}$ x $3\frac{1}{2}$	125	$3\frac{1}{8}$ x 14	12000

Sizes $\frac{3}{16}$ to $\frac{1}{2}$ inch inclusive, are made from Exact Size material as shown.
Sizes $\frac{9}{16}$ and larger are made from material $\frac{1}{32}$ inch heavier than size indicated.

Elwel Pattern Chain

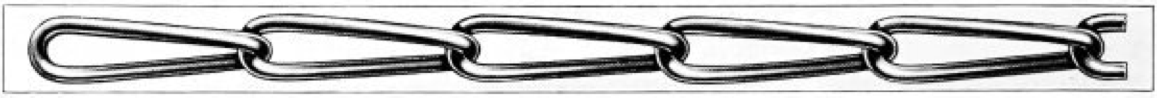
THIS chain is electrically welded, with all welds smoothly trimmed to size of wire from which it is formed. By our process of electric welding full strength of material is secured.

Made in Machine and Coil Chain, in straight and twist links. Unless otherwise specified, twist link chain is furnished.

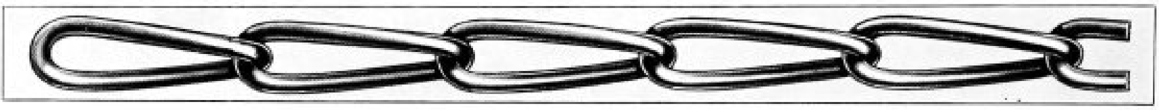
A general utility chain where strength and compactness are required.

Elwel Coil Chain—*Twist Link*

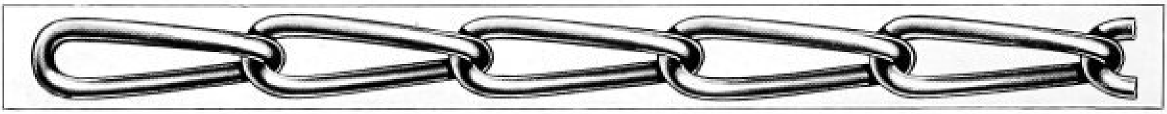
Illustrations are full size



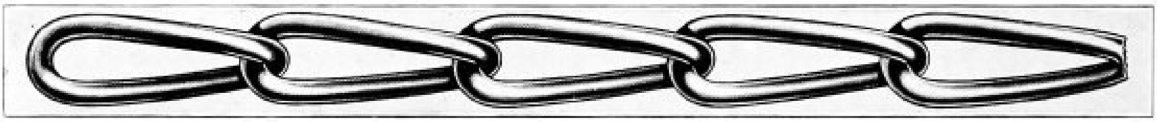
13 **Ga.**—3/32-inch. Tensile Strength, 475 lbs. **No. 6** Weight per 100 feet, 6 lbs. 11 Links per foot



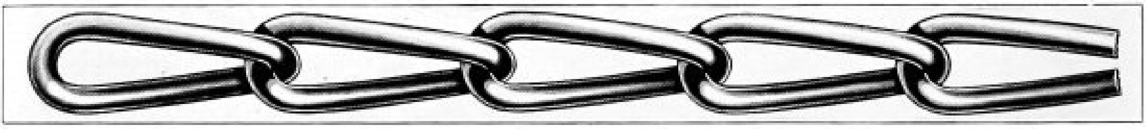
12 **Ga.**—7/64-inch. Tensile Strength, 590 lbs. **No. 5** Weight per 100 feet, 8 lbs. 11 Links per foot



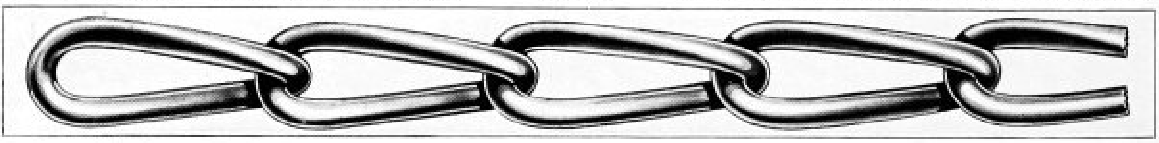
11 **Ga.**—1/8-inch. Tensile Strength, 710 lbs. **No. 4** Weight per 100 feet, 10 lbs. 11 Links per foot



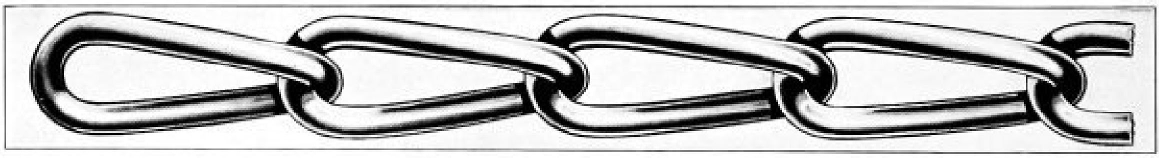
10 **Ga.**—9/64-inch. Tensile Strength, 830 lbs. **No. 3** Weight per 100 feet, 13 lbs. 10½ Links per foot



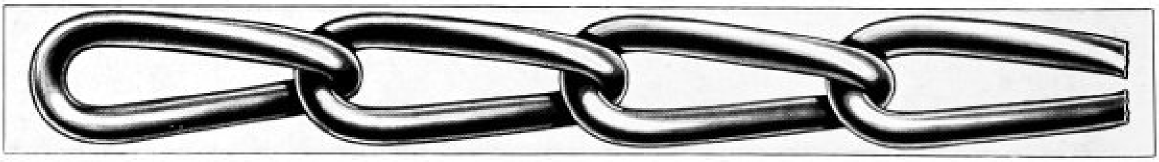
9 **Ga.**—5/32-inch—. Tensile Strength, 950 lbs. **No. 2** Weight per 100 feet, 16 lbs. 10½ Links per foot



8 **Ga.**—5/32-inch+. Tensile Strength, 1080 lbs. **No. 1** Weight per 100 feet, 20 lbs. 10 Links per foot



7 **Ga.**—11/64-inch. Tensile Strength, 1240 lbs. **No. 1-0** Weight per 100 feet, 23 lbs. 9¼ Links per foot



6 **Ga.**—3/16-inch. Tensile Strength, 1430 lbs. **No. 2-0** Weight per 100 feet, 28 lbs. 8¾ Links per foot

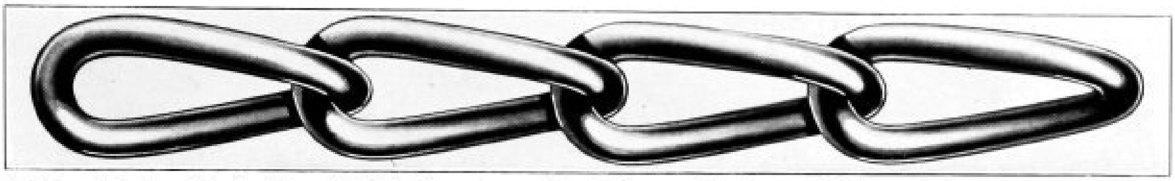
Furnished Bright Finish, unless otherwise ordered

Nos. 6 to 6/0 inclusive packed 100 feet in a carton. Weights, dimensions and fractional equivalents are approximate

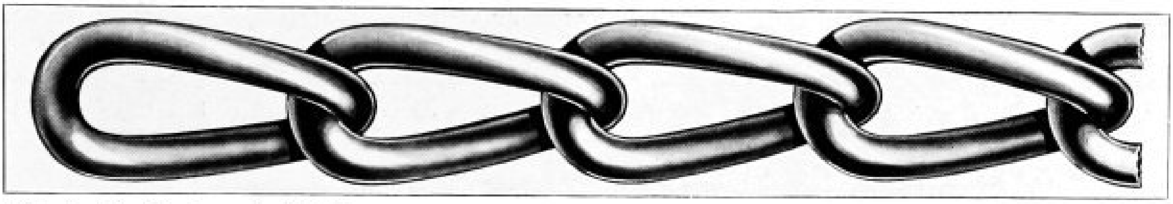
Table of Standard Wire Gauges on page 238

Elwel Coil Chain—*Twist Link*

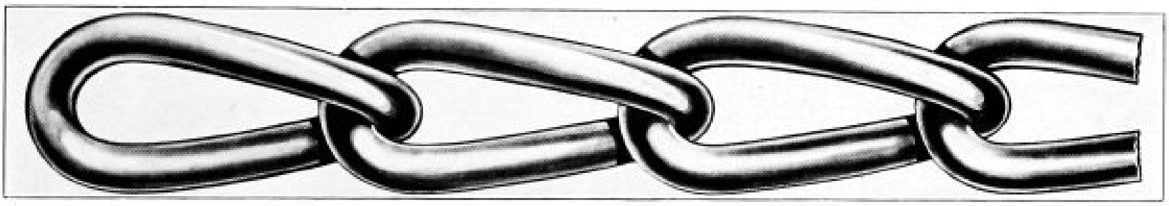
Illustrations are full size



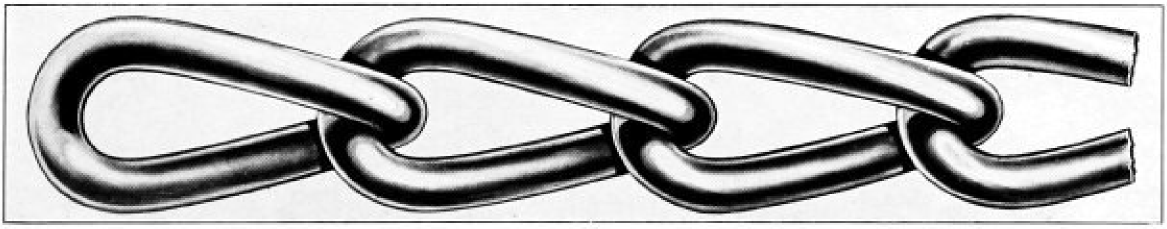
5 Ga.—13/64-inch. Tensile Strength, 1670 lbs. **No. 3-0** Weight per 100 feet, 33 lbs. 8¾ Links per foot



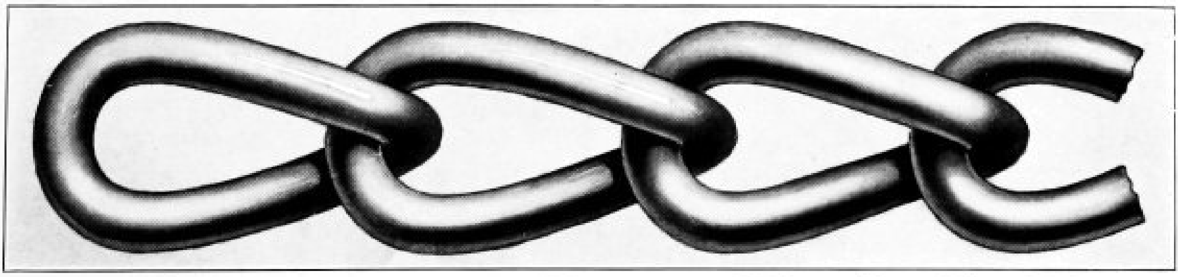
7/32-inch. Tensile Strength, 1890 lbs. **No. 4-0** Weight per 100 feet, 37 lbs. 8¾ Links per foot



¼-inch. Tensile Strength, 2530 lbs. **No. 5-0** Weight per 100 feet, 49 lbs. 7¾ Links per foot



9/32-inch. Tensile Strength, 3250 lbs. **No. 6-0** Weight per 100 feet, 64 lbs. 7¾ Links per foot



5/16-inch. Tensile Strength, 4050 lbs. **No. 7-0** Weight per 100 feet, 84 lbs. 8 Links per foot

Nos. 6 to 6/0 inclusive packed 100 feet in a carton.

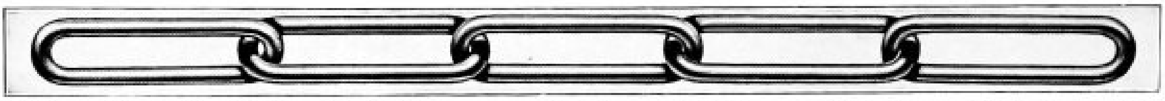
No. 7/0 supplied in lengths of 100 feet in bulk unless ordered in continuous length

Furnished Bright Finish, unless otherwise ordered

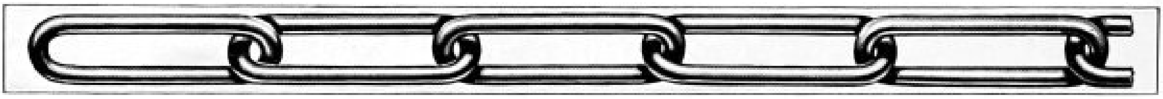
Weights, dimensions and fractional equivalents are approximate Table of Standard Wire Gauges on page 238

Elwel Coil Chain—*Straight Link*

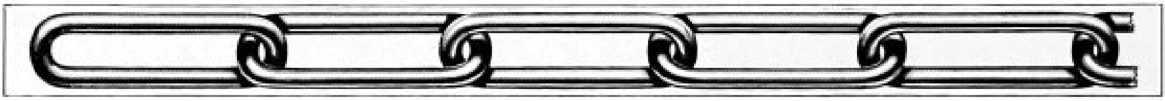
Illustrations are full size



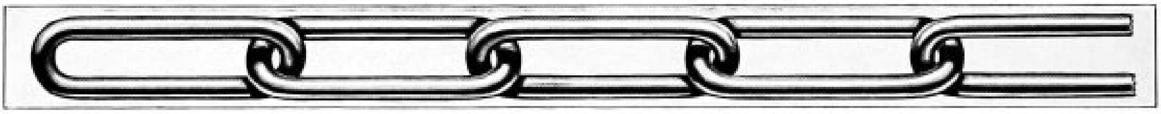
13 Ga.—3/32-inch. Tensile Strength, 475 lbs. **No. 6** Weight per 100 feet, 6 lbs. 10¾ Links per foot



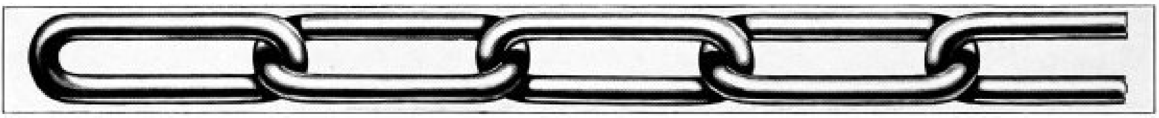
12 Ga.—7/64-inch. Tensile Strength, 590 lbs. **No. 5** Weight per 100 feet, 8 lbs. 10¾ Links per foot



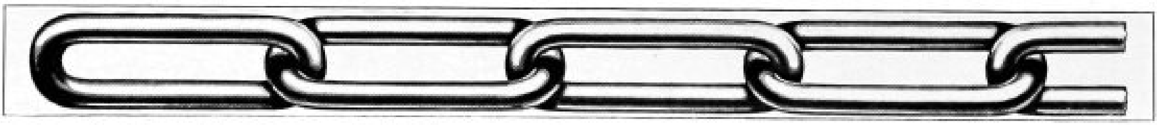
11 Ga.—1/8-inch. Tensile Strength, 710 lbs. **No. 4** Weight per 100 feet, 10 lbs. 10¾ Links per foot



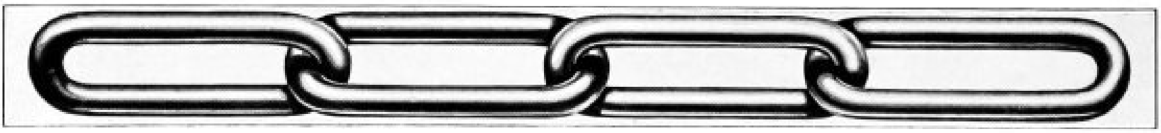
10 Ga.—9/64-inch. Tensile Strength, 830 lbs. **No. 3** Weight per 100 feet, 13 lbs. 10¼ Links per foot



9 Ga.—5/32-inch —. Tensile Strength, 950 lbs. **No. 2** Weight per 100 feet, 16 lbs. 10¼ Links per foot



8 Ga.—5/32-inch+. Tensile Strength, 1080 lbs. **No. 1** Weight per 100 feet, 19 lbs. 9¾ Links per foot



7 Ga.—11/64-inch. Tensile Strength, 1240 lbs. **No. 1-0** Weight per 100 feet, 23 lbs. 9 Links per foot

Nos. 6 to 6/0 inclusive packed 100 feet in a carton

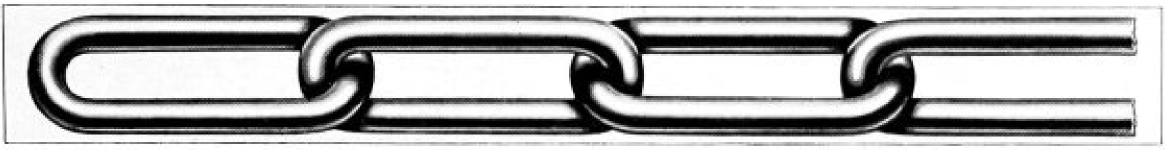
Furnished Bright Finish, unless otherwise ordered

Weights, dimensions and fractional equivalents are approximate

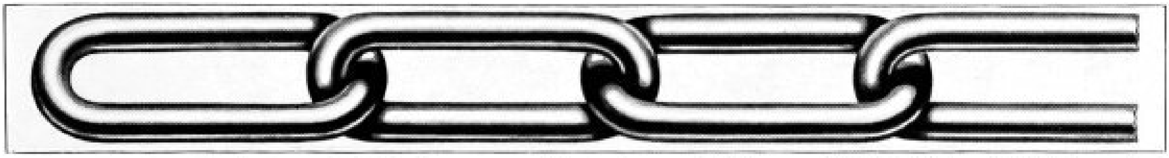
Table of Standard Wire Gauges on page 238

Elwel Coil Chain—*Straight Link*

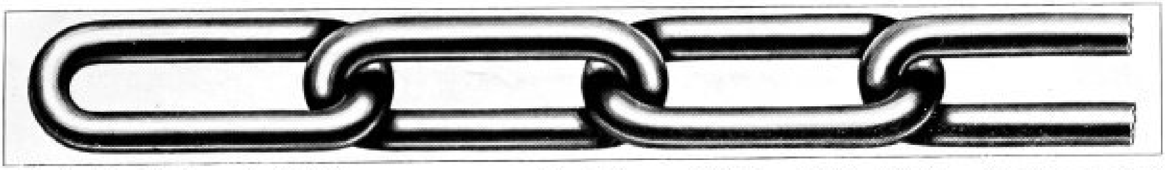
Illustrations are full size



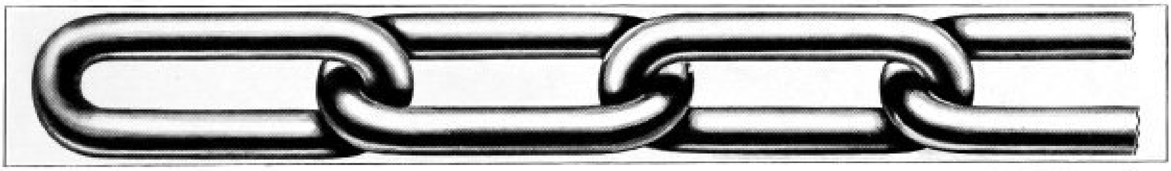
6 Ga.—3/16-inch. Tensile Strength, 1430 lbs. **No. 2-0** Weight per 100 feet, 27 lbs. 8½ Links per foot



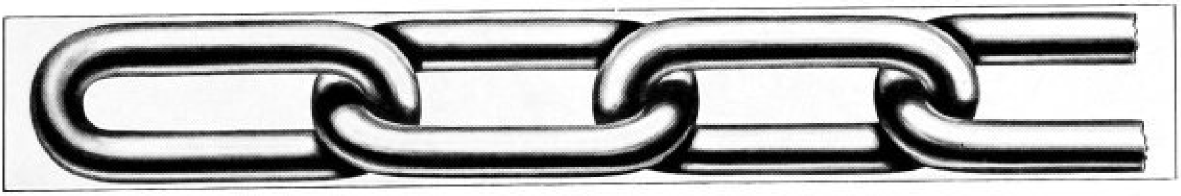
5 Ga.—13/64-inch. Tensile Strength, 1670 lbs. **No. 3-0** Weight per 100 feet, 32 lbs. 8½ Links per foot



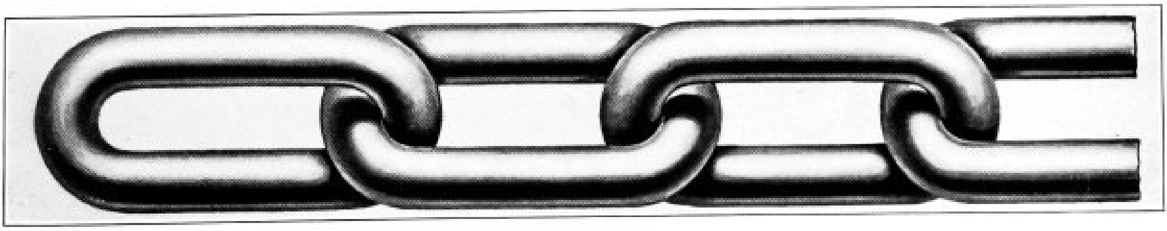
7/32-inch. Tensile Strength, 1890 lbs. **No. 4-0** Weight per 100 feet, 35 lbs. 8½ Links per foot



1/4-inch. Tensile Strength, 2530 lbs. **No. 5-0** Weight per 100 feet, 47 lbs. 8¼ Links per foot



9/32-inch. Tensile Strength, 3250 lbs. **No. 6-0** Weight per 100 feet, 61 lbs. 8 Links per foot



5/16-inch. Tensile Strength, 4050 lbs. **No. 7-0** Weight per 100 feet, 80 lbs. 7½ Links per foot

Nos. 6 to 6/0 inclusive packed 100 feet in a carton

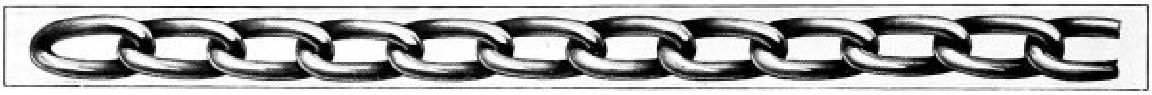
No. 7/0 supplied in lengths of 100 feet in bulk unless ordered in continuous length

Furnished Bright Finish, unless otherwise ordered

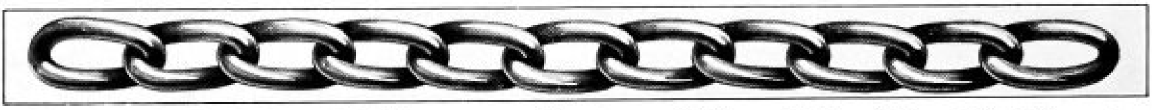
Weights, dimensions and fractional equivalents are approximate. Table of Standard Wire Gauges on page 238

Elwel Machine Chain—*Twist Link*

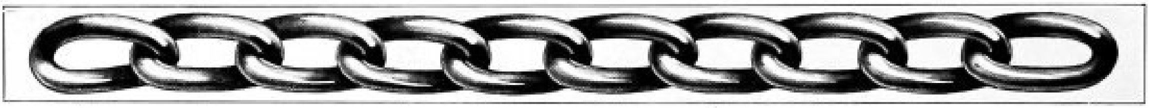
Illustrations are full size



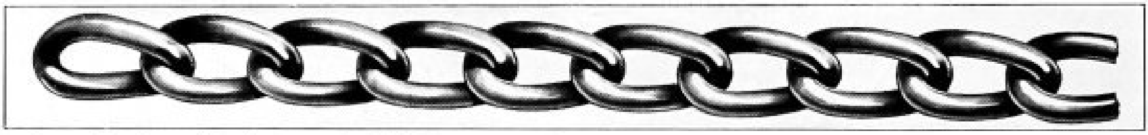
12 Ga.—7/64-inch. Tensile Strength, 620 lbs. **No. 5** Weight per 100 feet, 10 lbs. 25 Links per foot



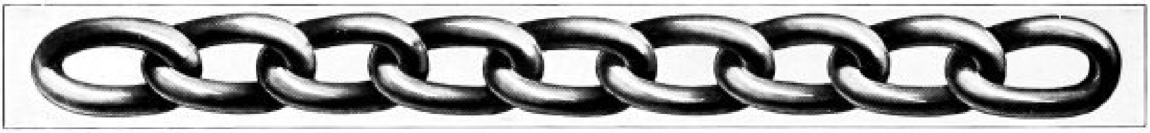
11 Ga.—⅛-inch. Tensile Strength, 750 lbs. **No. 4** Weight per 100 feet, 13 lbs. 23½ Links per foot



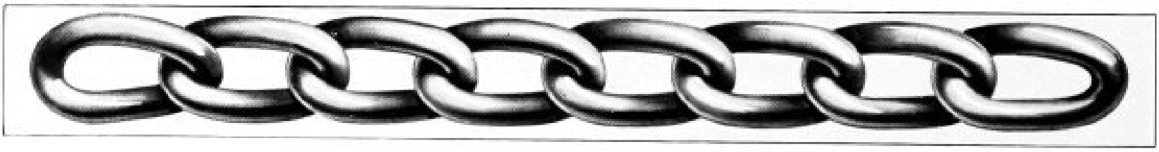
10 Ga.—9/64-inch. Tensile Strength, 875 lbs. **No. 3** Weight per 100 feet, 16 lbs. 21½ Links per foot



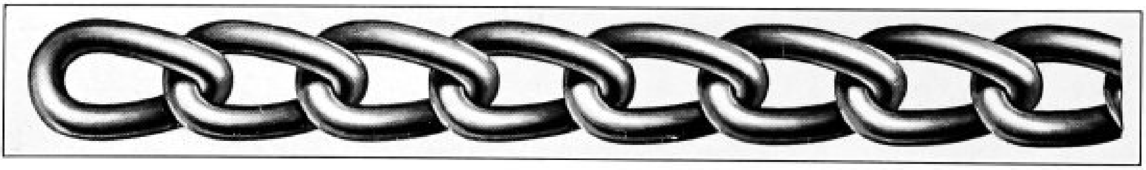
9 Ga.—5/32-inch—. Tensile Strength, 1000 lbs. **No. 2** Weight per 100 feet, 21 lbs. 21 Links per foot



8 Ga.—5/32-inch+. Tensile Strength, 1140 lbs. **No. 1** Weight per 100 feet, 25 lbs. 20½ Links per foot



7 Ga.—11/64-inch. Tensile Strength, 1310 lbs. **No. 1-0** Weight per 100 feet, 29 lbs. 17½ Links per foot



6 Ga.—3/16-inch. Tensile Strength, 1510 lbs. **No. 2-0** Weight per 100 feet, 34 lbs. 16½ Links per foot

Nos. 5 to 6/0 inclusive packed 100 feet in a carton

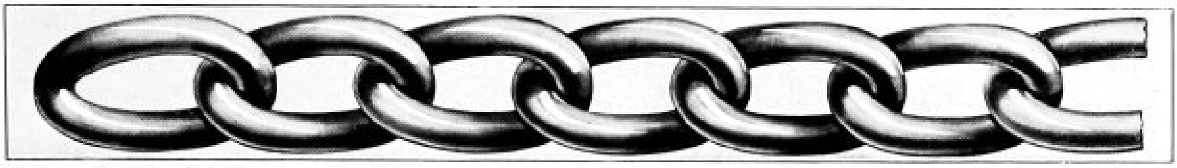
Furnished Bright Finish, unless otherwise ordered

Weights, dimensions and fractional equivalents are approximate

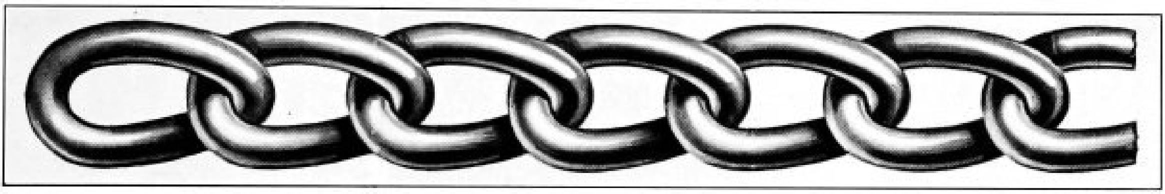
Table of Standard Wire Gauges on page 238

Elwel Machine Chain—*Twist Link*

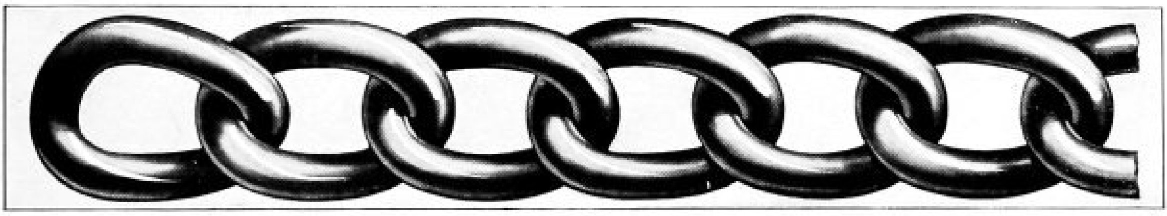
Illustrations are full size



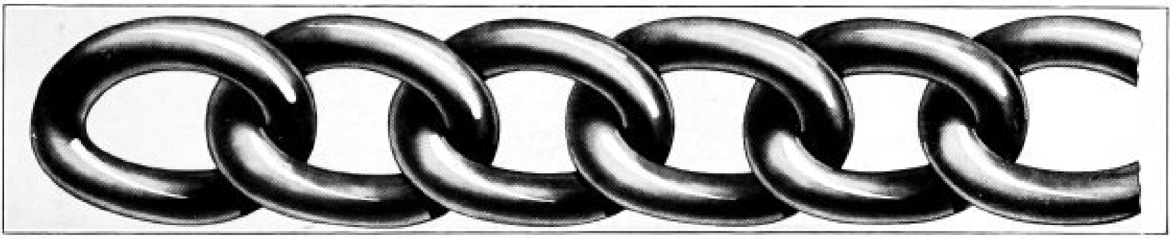
5 Ga.—13/64-inch. Tensile Strength, 1760 lbs. **No. 3-0** Weight per 100 feet, 40 lbs. 15 Links per foot



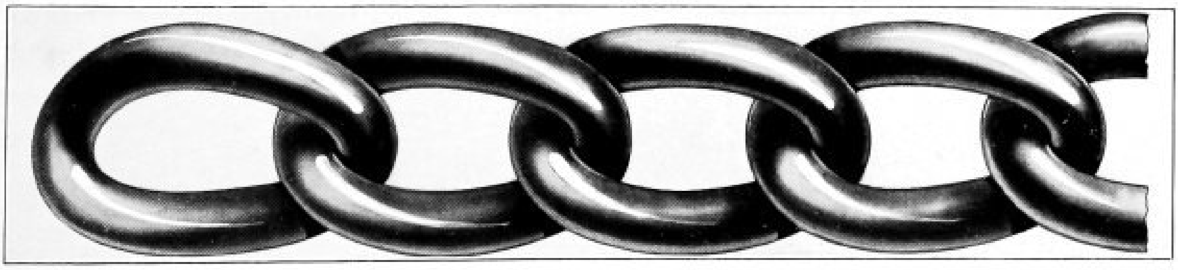
7/32-inch. Tensile Strength, 1990 lbs. **No. 4-0** Weight per 100 feet, 50 lbs. 14¾ Links per foot



¼-inch. Tensile Strength, 2660 lbs. **No. 5-0** Weight per 100 feet, 64 lbs. 14 Links per foot



9/32-inch. Tensile Strength, 3420 lbs. **No. 6-0** Weight per 100 feet, 78 lbs. 13 Links per foot



5/16-inch. Tensile Strength, 4260 lbs. **No. 7-0** Weight per 100 feet, 94 lbs. 10¼ Links per foot

Nos. 5 to 6/0 inclusive packed 100 feet in a carton.
No. 7/0 supplied in lengths of 100 feet in bulk unless ordered in continuous length

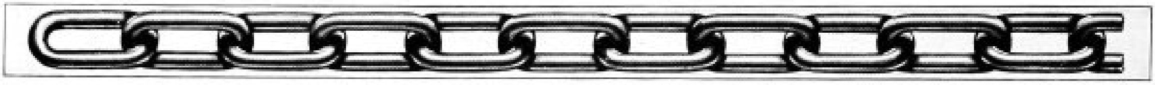
Furnished Bright Finish, unless otherwise ordered

Weights, dimensions and fractional equivalents are approximate

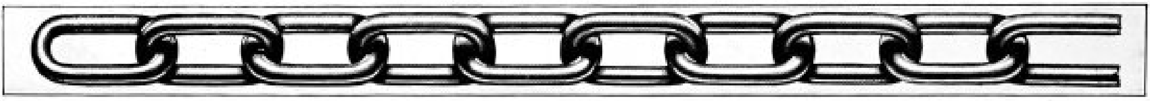
Table of Standard Wire Gauges on page 238

Elwel Machine Chain—*Straight Link*

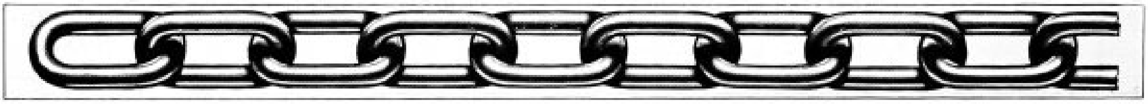
Illustrations are full size



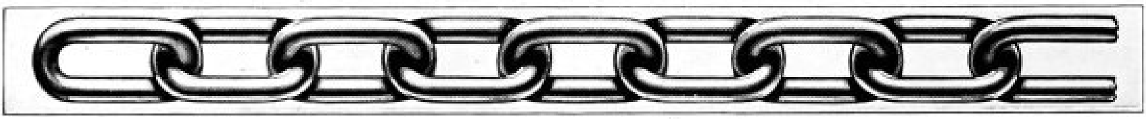
12 Ga.—$\frac{7}{64}$-inch. Tensile Strength, 620 lbs. **No. 5** Weight per 100 feet, 9 lbs. 24 Links per foot



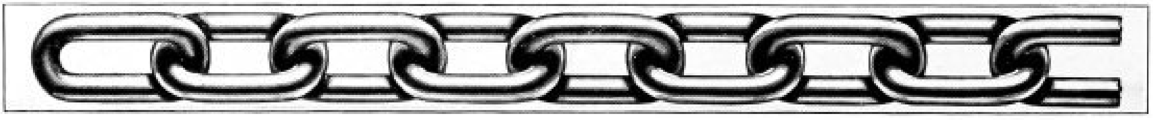
11 Ga.—⅛-inch. Tensile Strength, 750 lbs. **No. 4** Weight per 100 feet, 12 lbs. 21½ Links per foot



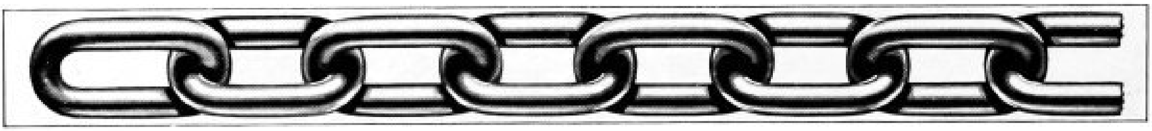
10 Ga.—$\frac{9}{64}$-inch. Tensile Strength, 875 lbs. **No. 3** Weight per 100 feet, 16 lbs. 19¾ Links per foot



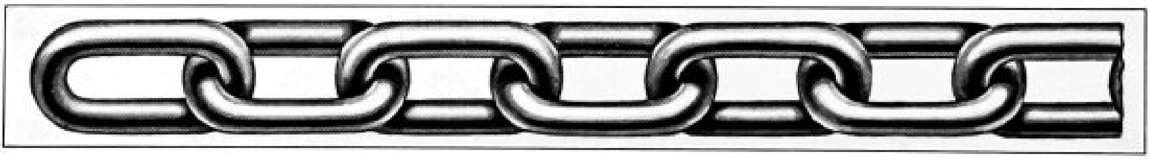
9 Ga.—$\frac{5}{32}$-inch—. Tensile Strength, 1000 lbs. **No. 2** Weight per 100 feet, 20 lbs. 19½ Links per foot



8 Ga.—$\frac{5}{32}$-inch+. Tensile Strength, 1140 lbs. **No. 1** Weight per 100 feet, 23 lbs. 19 Links per foot



7 Ga.—$\frac{11}{64}$-inch. Tensile Strength, 1310 lbs. **No. 1-0** Weight per 100 feet, 28 lbs. 16¾ Links per foot



6 Ga.—$\frac{3}{16}$-inch. Tensile Strength, 1510 lbs. **No. 2-0** Weight per 100 feet, 32 lbs. 15¼ Links per foot

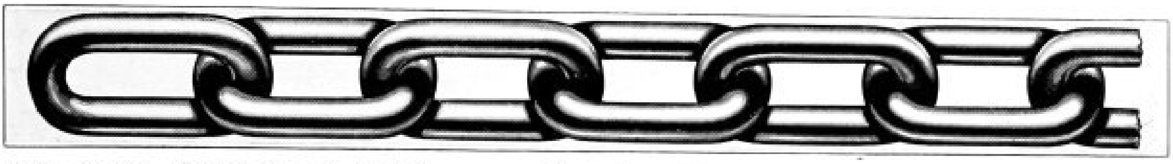
Nos. 5 to 6/0 inclusive packed 100 feet in a carton

Furnished Bright Finish, unless otherwise ordered

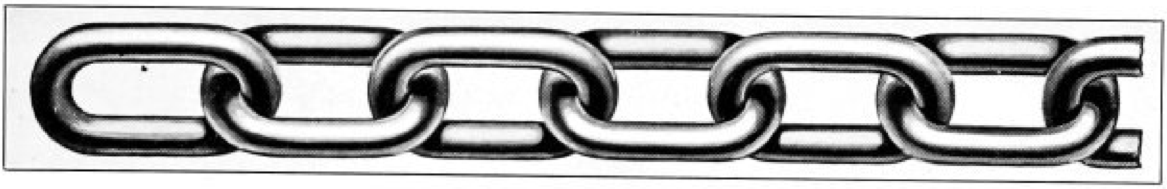
Weights, dimensions and fractional equivalents are approximate   Table of Standard Wire Gauges on page 238

Elwel Machine Chain—*Straight Link*

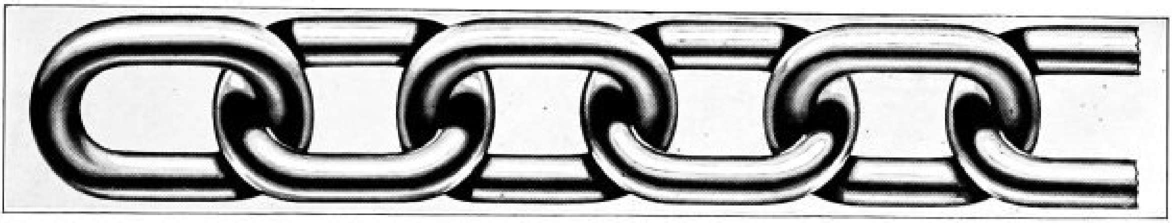
Illustrations are full size



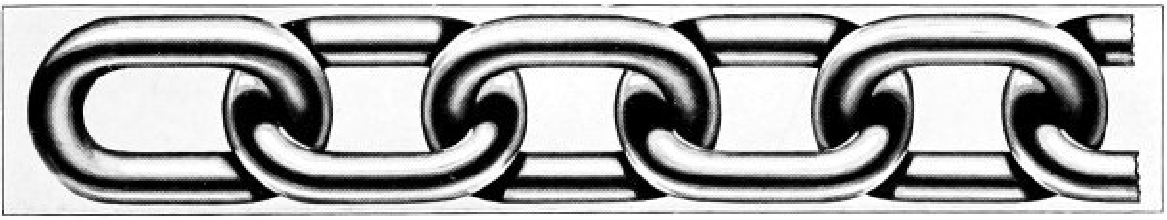
5 Ga.—13/64-inch. Tensile Strength, 1760 lbs **No. 3-0** Weight per 100 feet, 37 lbs. 14½ Links per foot



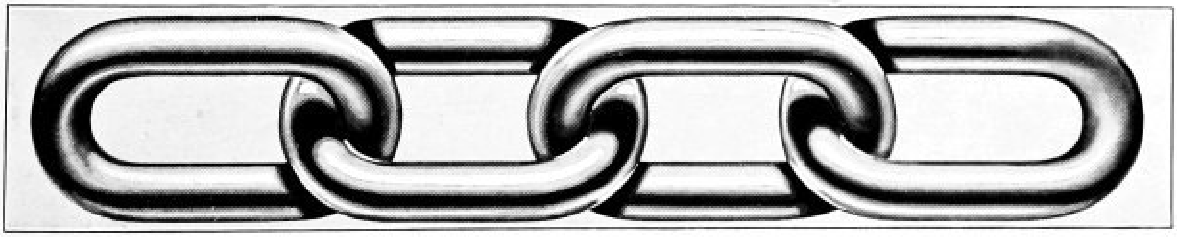
7/32-inch. Tensile Strength, 1990 lbs **No. 4-0** Weight per 100 feet, 46 lbs 13½ Links per foot



¼-inch. Tensile Strength, 2660 lbs. **No. 5-0** Weight per 100 feet, 59 lbs. 12¾ Links per foot



9/32-inch. Tensile Strength, 3420 lbs. **No. 6-0** Weight per 100 feet, 72 lbs. 12 Links per foot



5/16-inch. Tensile Strength, 4260 lbs. **No. 7-0** Weight per 100 feet, 86 lbs. 9½ Links per foot

Nos. 5 to 6/0 inclusive packed 100 feet in carton. No. 7/0 supplied in lengths of 100 feet in bulk unless ordered in continuous length

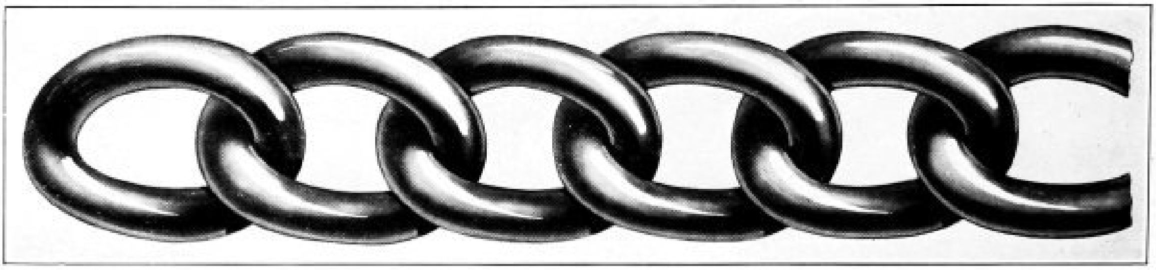
Furnished Bright Finish, unless otherwise ordered

Weights, dimensions and fractional equivalents are approximate

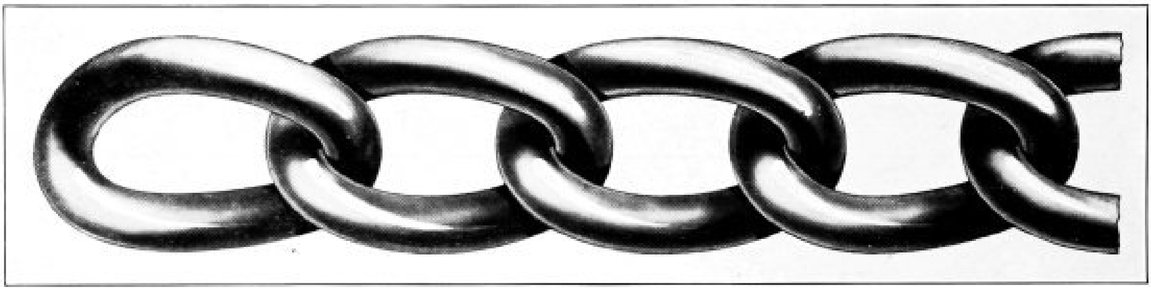
Table of Standard Wire Gauges on page 238

Elwel Truck Chain—*Twist Link*

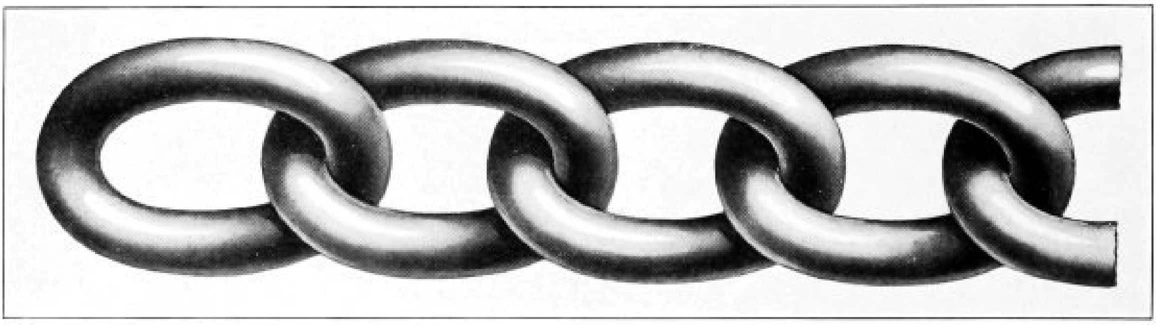
Illustrations are full size



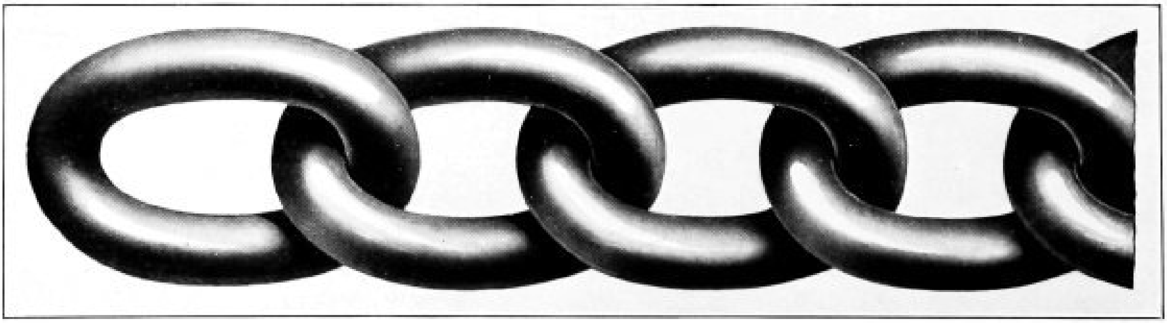
$\frac{9}{32}$-inch. Tensile Strength, 3420 lbs. **No. 6-0** Weight per 100 feet, 78 lbs. 13 Links per foot



$\frac{5}{16}$-inch. Tensile Strength, 4260 lbs. **No. 7-0** Weight per 100 feet, 94 lbs. $10\frac{1}{4}$ Links per foot



$\frac{11}{32}$-inch. Tensile Strength, 5160 lbs. **No. 8-0** Weight per 100 feet, 124 lbs. 10 Links per foot



$\frac{3}{8}$-inch. Tensile Strength, 6060 lbs. **No. 9-0** Weight per 100 feet, 136 lbs. $9\frac{1}{4}$ Links per foot

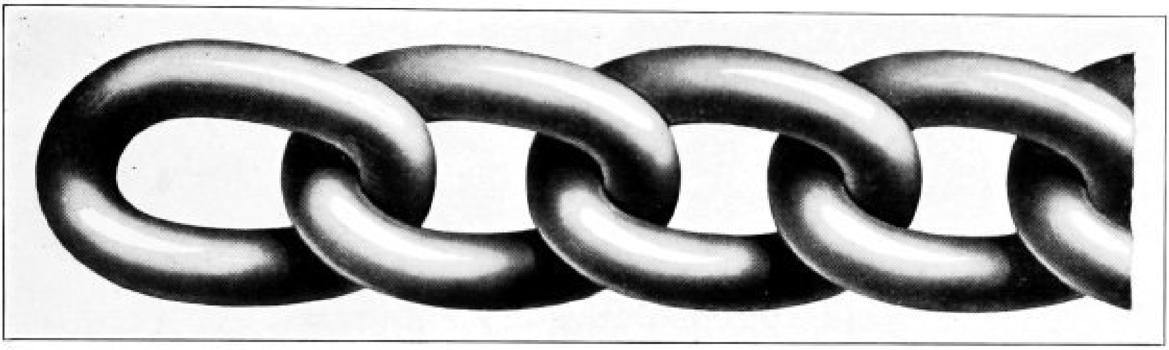
Nos. 6/0 to 12/0 inclusive supplied in lengths of 100 feet in bulk unless ordered in continuous length

Furnished Bright Finish, unless otherwise ordered

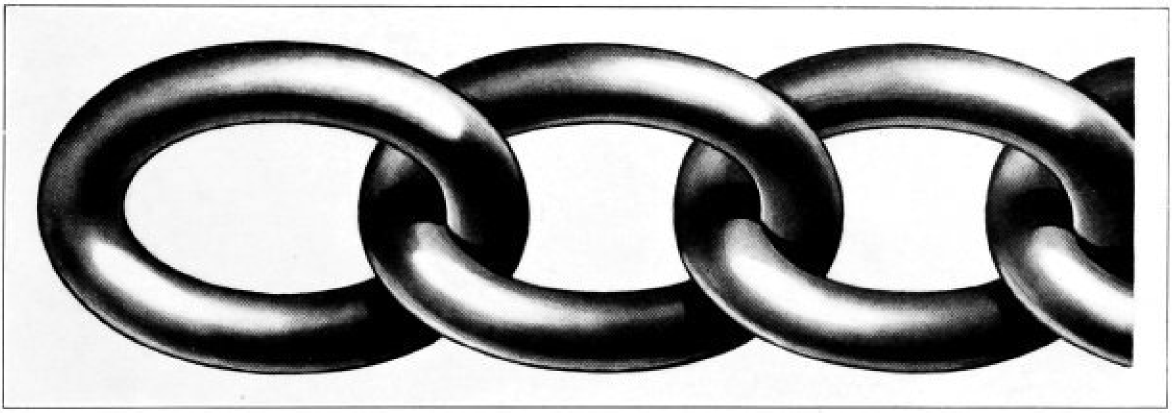
Weights and number of links per foot are approximate

Elwel Truck Chain—*Twist Link*

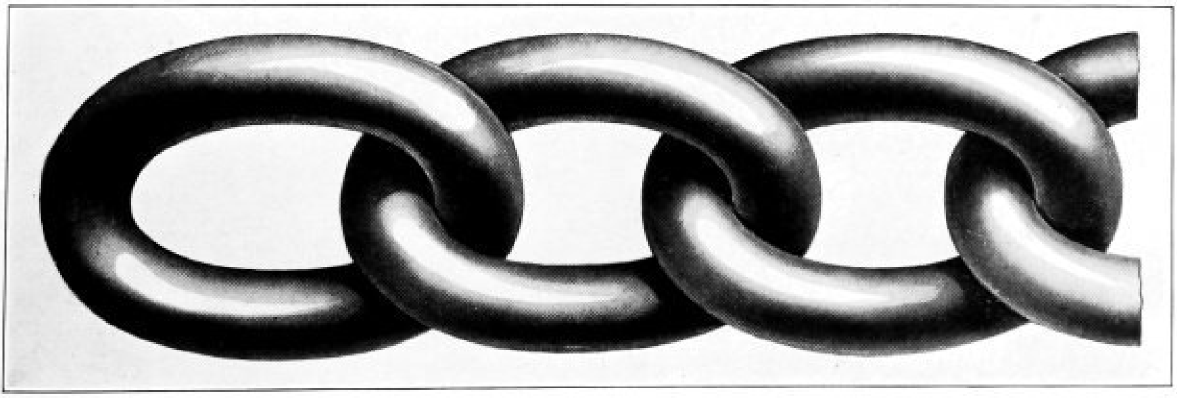
Illustrations are full size



$\frac{13}{32}$-inch. Tensile Strength, 7060 lbs. **No. 10-0** Weight per 100 feet, 180 lbs. 9½ Links per foot



$\frac{7}{16}$-inch. Tensile Strength, 8150 lbs. **No. 11-0** Weight per 100 feet, 200 lbs. 7½ Links per foot

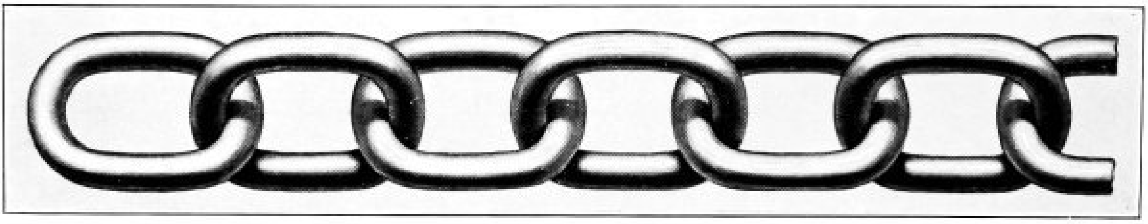


$\frac{15}{32}$-inch. Tensile Strength, 9500 lbs. **No. 12-0** Weight per 100 feet, 225 lbs. 7¼ Links per foot

Nos. 6/0 to 12/0 inclusive supplied in lengths of 100 feet in bulk unless ordered in continuous length

Furnished Bright Finish unless otherwise ordered Weights and number of links per foot are approximate

Elwel Passing Link Chain



This chain, as the name implies, is constructed with links especially wide so as to permit of free action and the passing of one link by the other, making it impossible to kink. Especially adapted for agricultural and general utility purposes.

Sold in continuous lengths, or cut to length as ordered. Made in the following sizes:

Trade Size	Size Material	Inside Length Inches	Inside Width Inches	Links per Foot	Weight per 100 Feet Pounds
No. 1/0	No. 7 Gauge	$\frac{7}{8}$	$\frac{15}{32}$	14	27
No. 2/0	No. 6 Gauge	$\frac{7}{8}$	$\frac{15}{32}$	14	33
No. 3/0	No. 5 Gauge	$\frac{7}{8}$	$\frac{15}{32}$	14	39
No. 4/0	$\frac{7}{32}$ inch	$\frac{7}{8}$	$\frac{1}{2}$	14	45
No. 5/0	$\frac{1}{4}$ inch	$\frac{15}{16}$	$\frac{19}{32}$	$12\frac{3}{4}$	59
No. 6/0	$\frac{9}{32}$ inch	1	$\frac{5}{8}$	12	72
No. 7/0	$\frac{5}{16}$ inch	$1\frac{17}{64}$	$\frac{21}{32}$	$9\frac{1}{2}$	86

Dimensions and weights are approximate.

Furnished Bright Finish unless otherwise ordered.

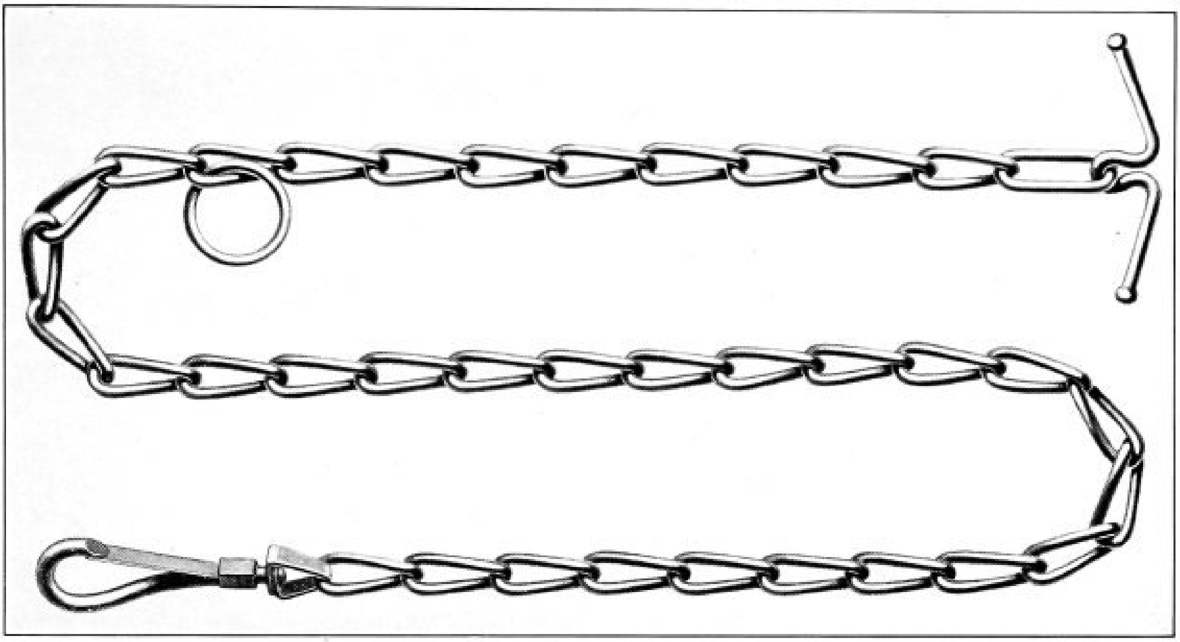
Nos. 1/0 to 4/0 inclusive packed 100 feet in a carton.

Nos. 5/0 to 7/0 inclusive supplied in lengths of 100 feet in bulk unless ordered in continuous length.

Table of Standard Wire Gauges on page 238

Halter and Dog Chains

Elwel Pattern



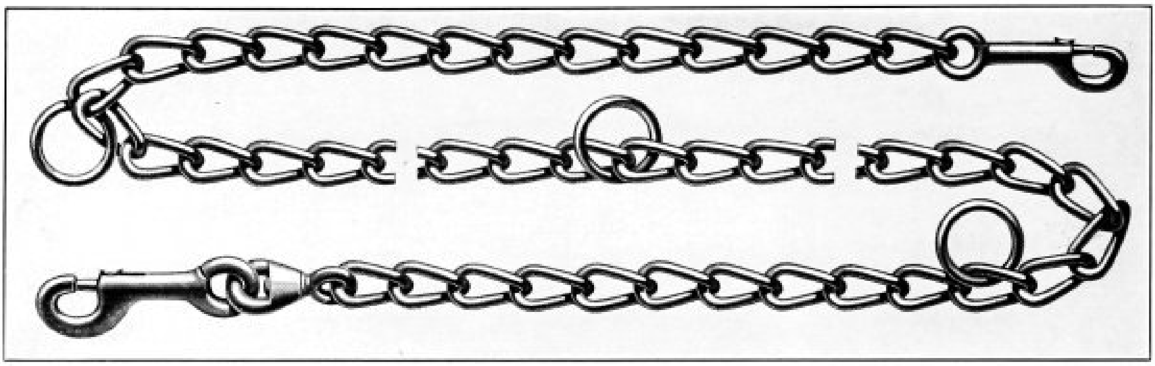
Snap on one end, Toggle on other end, and Ring for adjustment.
Strong, smooth and highly polished.

Number	W. & M. Gauge	4½ Feet		6 Feet	
		Approximate Weight per Dozen. Pounds	Quantity in Carton	Approximate Weight per Dozen. Pounds	Quantity in Carton
4/0	4	24	1 dozen	30	1 dozen
3/0	5	21	1 dozen	27	1 dozen
2/0	6	18	1 dozen	23	1 dozen
1/0	7	15	1 dozen	19	1 dozen
1	8	12	1 dozen	16	1 dozen
2	9	10	1 dozen	13	1 dozen
3	10	8	1 dozen	10	1 dozen
4	11	7	1 dozen	8	1 dozen
5	12	5	1 dozen	6	1 dozen
6	13	4	1 dozen	5	1 dozen

Can be furnished with two Toggles or with two Snaps instead of Toggle and Snap
For Weldless Halter Chains, see pages 193 to 196

Table of Standard Wire Gauges on page 238

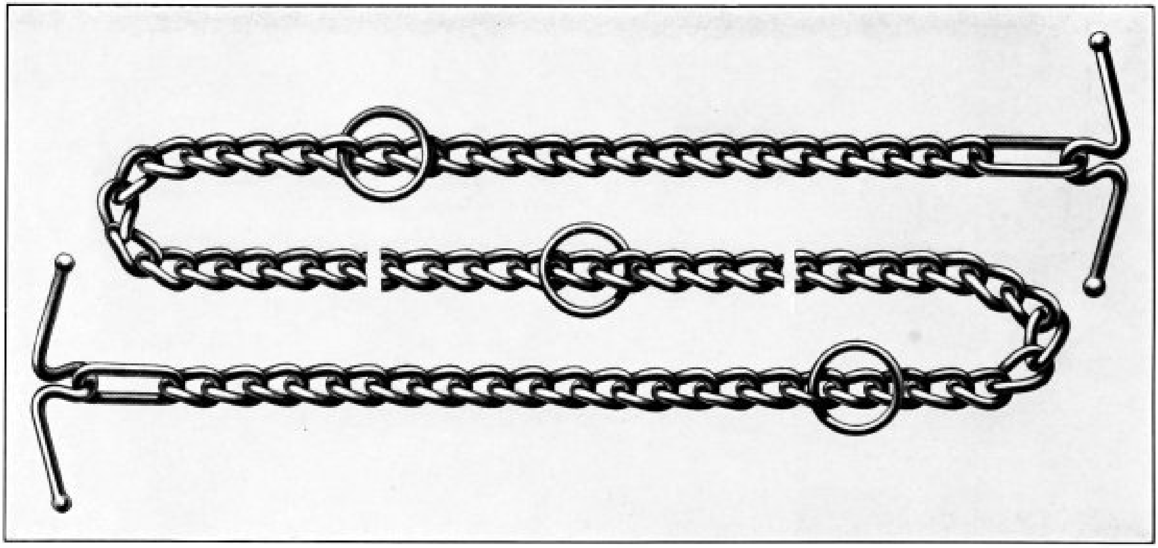
Acco Halter Chains



Eastern Pattern

Links are shorter and wider than in regular "Elwel" Halter Chain

Number	Length	W. & M. Gauge	Finish	Approximate Weight per Dozen	Quantity in Carton
32	4½ feet	9	XC Plate	14 pounds	1 Dozen
34	4½ feet	6	XC Plate	21 pounds	1 Dozen



Pennsylvania Pattern

Regularly furnished in twist link unless straight link is specified

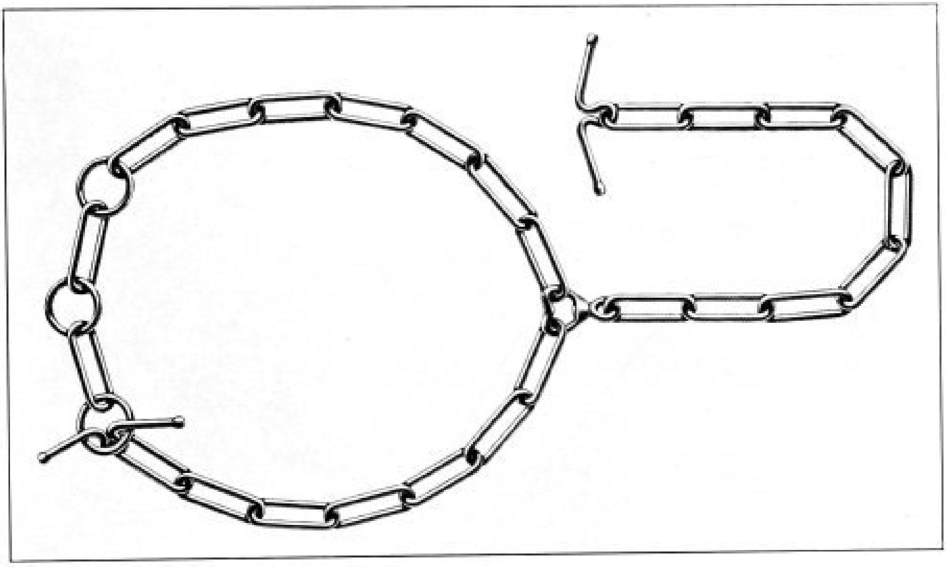
Number	Length	Size	Approximate Weight per Dozen	Quantity in Carton
72	4½ feet	2/0 Long Twist Links	20 Pounds	1 Dozen
73	4½ feet	3/0 Long Twist Links	21 Pounds	1 Dozen
74	4½ feet	4/0 Long Twist Links	23 Pounds	1 Dozen
76	4½ feet	2/0 Short Twist Links	22 Pounds	1 Dozen
77	4½ feet	3/0 Short Twist Links	24 Pounds	1 Dozen
78	4½ feet	4/0 Short Twist Links	27 Pounds	1 Dozen

Furnished Bright Finish unless otherwise ordered

For Weldless Halter Chains see pages 193 to 196

Elwel Cow Ties

El-Wel-Co-Ties



Ohio Pattern

Number	Size Material	4½ Feet		5 Feet		5½ Feet		6 Feet	
		Approximate Weight per Dozen, Pounds	Approximate Quantities in a Barrel, Dozen	Approximate Weight per Dozen, Pounds	Approximate Quantities in a Barrel, Dozen	Approximate Weight per Dozen, Pounds	Approximate Quantities in a Barrel, Dozen	Approximate Weight per Dozen, Pounds	Approximate Quantities in a Barrel, Dozen
7/0	$\frac{5}{16}$-in.	46	14	49	12	53	9	58	7
6/0	$\frac{9}{32}$-in.	36	17	39	15	43	12	47	10
5/0	$\frac{1}{4}$-in.	28	17	31	15	33	14	36	12
4/0	$\frac{7}{32}$-in.	24	22	26	20	28	18	30	16
3/0	No. 5 Ga.	19	25	20	25	22	24	24	23
2/0	No. 6 Ga.	16	25	17	25	19	25	20	25
1/0	No. 7 Ga.	14	25	15	25	16	25	17	25

When ordering, state the size and length wanted

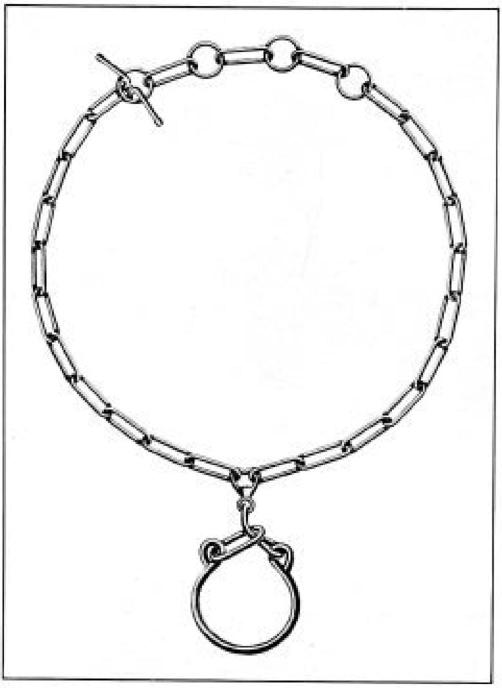
Furnished Bright Finish, in Bulk

For Weldless Cow Ties see pages 205 to 207

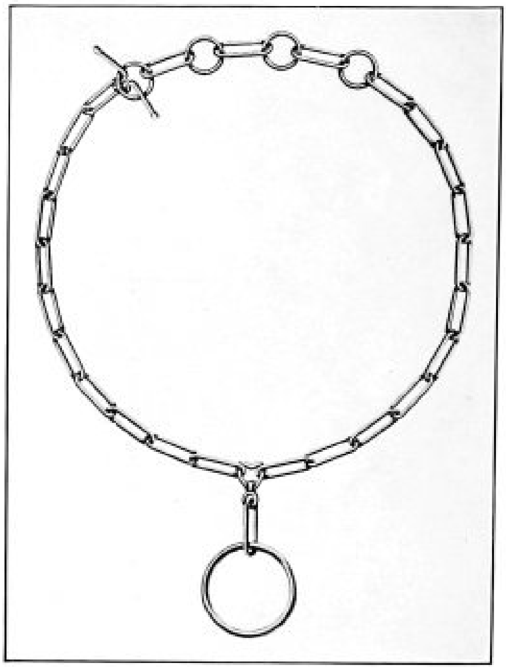
Table of Standard Wire Gauges on page 238

Elwel Cow Ties

El-Wel-Co-Ties



Open Ring Pattern
Ring, 3¼ inches inside diameter



Closed Ring Pattern
Ring, 3½ inches inside diameter

Approximate Weight per Dozen—Pounds

Open Ring Pattern

Number	Size Material	3 Feet	3½ Feet	4 Feet	4½ Feet	5 Feet
6/0	$\frac{9}{32}$-in.	...	...	40	43	46
5/0	$\frac{1}{4}$-in.	...	...	33	35	37
4/0	$\frac{7}{32}$-in.	23	26	28	30	32
3/0	No. 5 Gauge	20	22	24	26	27
2/0	No. 6 Gauge	18	19	21	22	23

Closed Ring Pattern

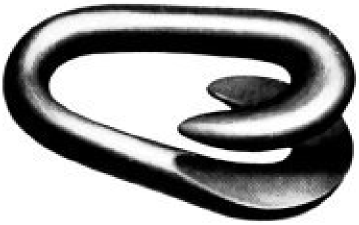
Number	Size Material	3 Feet	3½ Feet	4 Feet	4½ Feet	5 Feet
6/0	$\frac{9}{32}$-in.	...	...	37	41	44
5/0	$\frac{1}{4}$-in.	...	...	30	33	36
4/0	$\frac{7}{32}$-in.	21	23	25	27	29
3/0	No. 5 Gauge	17	19	21	23	25
2/0	No. 6 Gauge	15	16	18	19	20

Furnished Bright Finish, in Bulk

For Weldless Cow Ties see pages 205 to 207

Table of Standard Wire Gauges on page 238

Repair Links

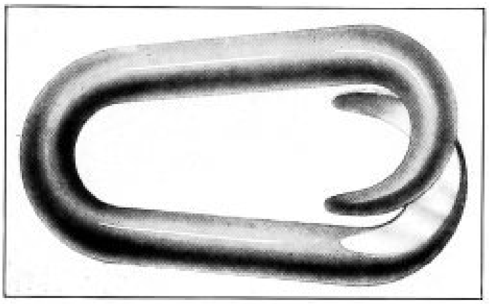


Dimensions and Weights

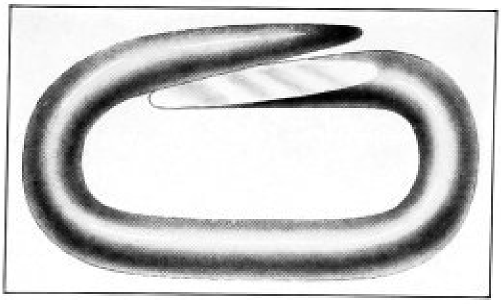
Trade Size Inches	Inside Length Inches	Inside Width Inches	Gross in Carton	Approximate Weight per Gross, Pounds
10-3 ($\frac{7}{32}$-inch)	$1\frac{1}{4}$	$\frac{1}{2}$	$\frac{1}{2}$	8
10-2 ($\frac{1}{4}$-inch)	$1\frac{1}{4}$	$\frac{1}{2}$	$\frac{1}{2}$	11
10-1 ($\frac{9}{32}$-inch)	$1\frac{1}{4}$	$\frac{1}{2}$	$\frac{1}{2}$	15
$\frac{5}{16}$ x $1\frac{1}{2}$	$1\frac{1}{2}$	$\frac{3}{4}$	$\frac{1}{2}$	21
$\frac{3}{8}$ x $1\frac{5}{8}$	$1\frac{5}{8}$	$\frac{3}{4}$	$\frac{1}{3}$	31
$\frac{1}{4}$ x $1\frac{1}{2}$	$1\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{3}$	13
$\frac{1}{4}$ x 2	2	$\frac{5}{8}$	$\frac{1}{3}$	14
$\frac{1}{4}$ x $2\frac{1}{2}$	$2\frac{1}{2}$	$\frac{5}{8}$	$\frac{1}{3}$	18
$\frac{1}{4}$ x 3	3	$\frac{3}{4}$	$\frac{1}{4}$	20
$\frac{5}{16}$ x 2	2	$\frac{3}{4}$	$\frac{1}{4}$	24
$\frac{5}{16}$ x $2\frac{1}{2}$	$2\frac{1}{2}$	$\frac{3}{4}$	$\frac{1}{4}$	28
$\frac{5}{16}$ x 3	3	$\frac{3}{4}$	$\frac{1}{4}$	32

Furnished Bright Finish, in Cartons

Lap Links



End Open



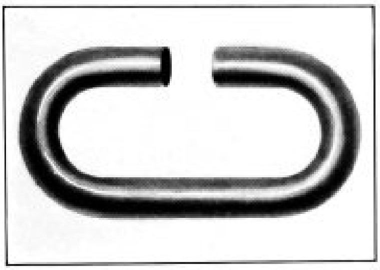
Side Open

Dimensions and Weights

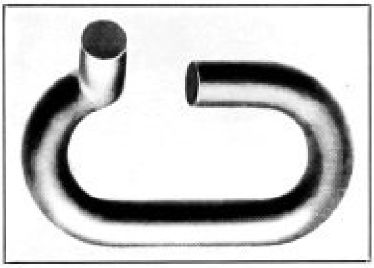
Trade Size Inches	Inside Length Inches	Inside Width Inches	Approximate Weight per Gross, Pounds
⅜ x 2	2	¾	34
⅜ x 2½	2½	¾	36
⅜ x 3	3	¾	41
7/16 x 2	2	1	48
7/16 x 2½	2½	1	55
7/16 x 3	3	1	63
½ x 2	2	1	65
½ x 2½	2½	1	74
½ x 3	3	1	84
9/16 x 2	2	1	84
9/16 x 2½	2½	1	96
9/16 x 3	3	1	108
9/16 x 3½	3½	1	120
⅝ x 2	2	1⅛	108
⅝ x 2½	2½	1⅛	124
⅝ x 3	3	1⅛	139
⅝ x 3½	3½	1⅛	154
¾ x 3	3	1¼	211

Furnished Bright unless ordered Self-Colored.
End Open Links will be supplied unless Side Open Links are specified.
Packed in Bulk.

"C" Links



Plain Pattern



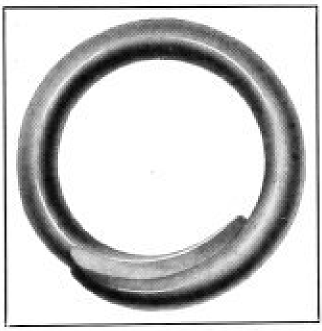
Dixie Pattern

Dimensions and Weights

Trade Size Inches	Inside Length Inches	Inside Width Inches	Approx. Weight per Gross—Pounds Plain	Dixie
$\frac{1}{2}$ x $2\frac{1}{2}$	$2\frac{1}{2}$	$\frac{7}{8}$	55	62
$\frac{9}{16}$ x $2\frac{1}{2}$	$2\frac{1}{2}$	1	85	92
$\frac{9}{16}$ x 3	3	1	95	100

Furnished Bright Finish unless ordered Self-Colored. Packed in Bulk.

Lap Rings



Dimensions and Weights

Trade Size Inches	Inside Diameter Inches	Approximate Weight per Gross. Pounds	Trade Size Inches	Inside Diameter Inches	Approximate Weight per Gross. Pounds	Trade Size Inches	Inside Diameter Inches	Approximate Weight per Gross. Pounds
$\frac{5}{16}$ x $1\frac{1}{2}$	$1\frac{1}{2}$	20	$\frac{7}{16}$ x $2\frac{1}{2}$	$2\frac{1}{2}$	62	$\frac{9}{16}$ x $2\frac{1}{2}$	$2\frac{1}{2}$	107
$\frac{5}{16}$ x 2	2	25	$\frac{7}{16}$ x 3	3	73	$\frac{9}{16}$ x 3	3	125
$\frac{5}{16}$ x $2\frac{1}{2}$	$2\frac{1}{2}$	30	$\frac{1}{2}$ x 2	2	69	$\frac{9}{16}$ x $3\frac{1}{2}$	$3\frac{1}{2}$	142
$\frac{3}{8}$ x 2	2	37	$\frac{1}{2}$ x $2\frac{1}{2}$	$2\frac{1}{2}$	83	$\frac{5}{8}$ x $2\frac{1}{2}$	$2\frac{1}{2}$	135
$\frac{3}{8}$ x $2\frac{1}{2}$	$2\frac{1}{2}$	45	$\frac{1}{2}$ x 3	3	97	$\frac{5}{8}$ x 3	3	157
$\frac{3}{8}$ x 3	3	53	$\frac{1}{2}$ x $3\frac{1}{2}$	$3\frac{1}{2}$	111	$\frac{5}{8}$ x $3\frac{1}{2}$	$3\frac{1}{2}$	178
$\frac{7}{16}$ x 2	2	52	$\frac{9}{16}$ x 2	2	90			

Furnished Bright Finish unless ordered Self-Colored. Packed in Bulk

Harness Chains

On the following pages we illustrate various types and sizes of Harness Chains.

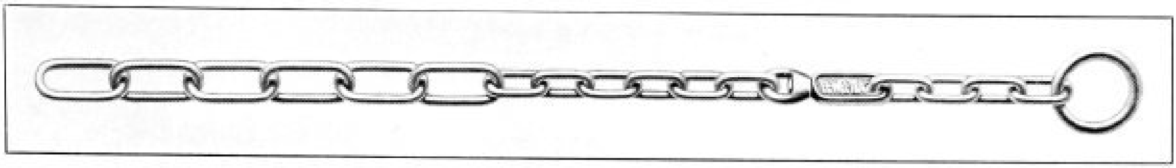
All Harness Chains are furnished in Bright Finish unless otherwise specified, and made to **EL-WEL-TRA** Standard, which is actual number of links per foot.

Gauges Used in this Section

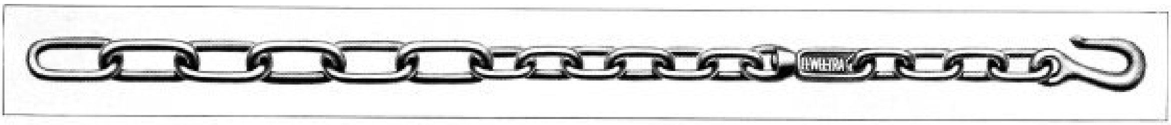
Number	00	0	1	2
Diameter in Inches	3/8	5/16	9/32	1/4

Butt Chains

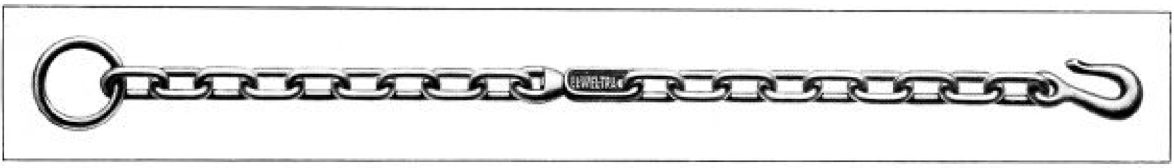
El-Wel-Tra



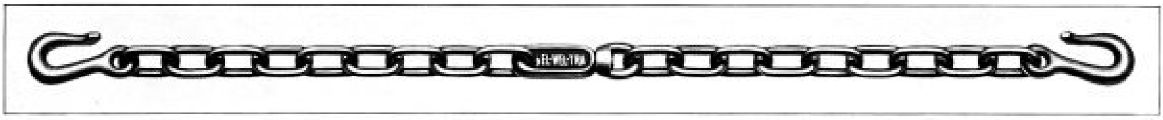
With Ring



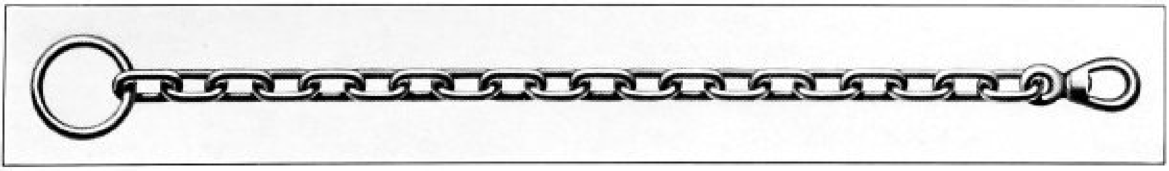
With Hook



With Ring and Hook



With Hook and Hook



Texas Pattern

Rings on Butt Chains are $1\frac{3}{4}$ inches inside diameter (Texas Pattern, 2 inches inside diameter), made from material $\frac{1}{16}$-inch heavier than material in body of chain. Number of End Links on Ring Butt Chains and Hook Butt Chains as follows: 18 inches, 4 links; 24 inches, 5 links; 30 inches and longer, 6 links. End links $\frac{3}{8}$ x 2 inches inside. Coast Pattern Butt Chains furnished with six end links $\frac{1}{2}$ x $2\frac{1}{2}$ inches inside.

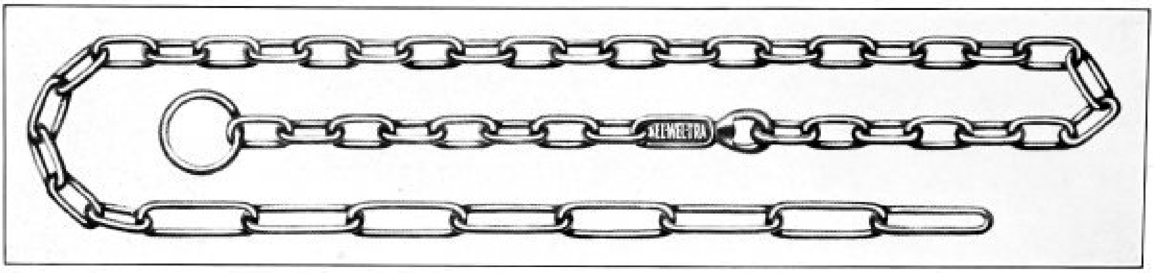
Approximate Weight per Dozen Pairs Butt Chains—Pounds

Length of Chain—Inches	18	24	30	36
8 Links per foot No. 2 ($\frac{1}{4}$-inch)	21	27	31	37
10 Links per foot No. 2 ($\frac{1}{4}$-inch)	21	27	33	37
8 Links per foot No. 1 ($\frac{9}{32}$-inch)	27	33	42	48
10 Links per foot No. 1 ($\frac{9}{32}$-inch)	26	33	42	49
8 Links per foot No. 0 ($\frac{5}{16}$-inch)	32	41	50	60
10 Links per foot No. 0 ($\frac{5}{16}$-inch)	32	41	51	61

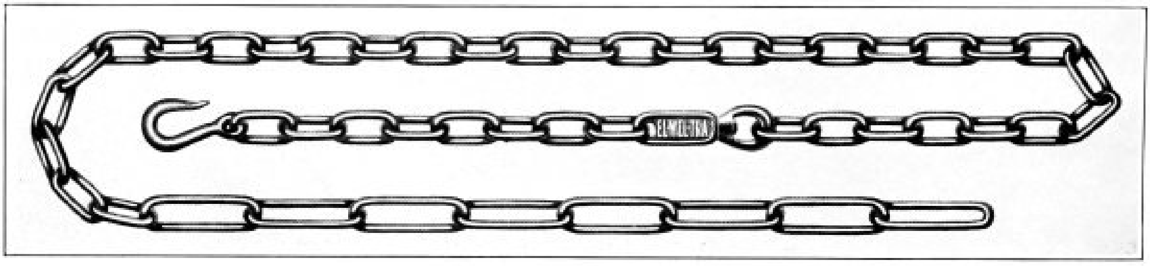
Straight Links only. Furnished in Bright, Japanned or Electro-Copper Plated Finish.

Packing: 1 dozen pairs in a bag; 18 and 24 inch, 20 dozen pairs, 30 and 36 inch, 16 dozen pairs, in a barrel.

EL-WEL-TRA TRACE CHAINS



With Ring



With Hook

Workmanship. EL-WEL-TRA Trace Chains are formed and electrically welded on automatic machines, thus insuring uniformity of construction and strength. Every pair is carefully inspected and tested. These chains represent the highest standard of Trace Chain construction.

Guarantee. We guarantee all EL-WEL-TRA Trace Chains to be perfect in workmanship and material and to withstand loads as per proof tests on following page. We will replace any chains that do not meet this guarantee.

Sizes and specifications on following page.

Note. The number of links per foot in EL-WEL-TRA Chains is *exact*, i. e., Trace Chains listed as 10 links per foot actually have 10 links to the foot.

Rings are $1\frac{3}{4}$ inches inside diameter and made from material $\frac{1}{16}$ inch heavier than material in body of chain. End links $\frac{1}{2} \times 2\frac{1}{2}$ inches inside.

Swivel Design
Patented March 11, 1913
"Elweltra"
Registered U. S. Pat. Office

EL-WEL-TRA TRACE CHAINS

Electrically Welded

List of Sizes

Made in Straight Link only

Exact number of links per foot

Length Over All Feet	Number of Links per Foot	Size of Material		Approximate Shipping Weight per 102 Pairs Pounds	Actual Proof Test of Each Chain Pounds
		Gauge	Inch		
6½	8	2	¼	685	1000
7	8	2	¼	715	1000
7½	8	2	¼	770	1000
6½	10	2	¼	700	1100
7	10	2	¼	740	1100
7½	10	2	¼	805	1100
8	10	2	¼	855	1100
6½	8	1	9/32	880	1200
7	8	1	9/32	940	1200
7½	8	1	9/32	1000	1200
7	10	1	9/32	980	1400
7½	10	1	9/32	1060	1400
8	10	1	9/32	1115	1400
9	10	1	9/32	1255	1400
7	8	0	5/16	1145	1700
7½	8	0	5/16	1225	1700
7	10	0	5/16	1220	1900
7½	10	0	5/16	1300	1900
8	10	0	5/16	1395	1900
9	10	0	5/16	1570	1900

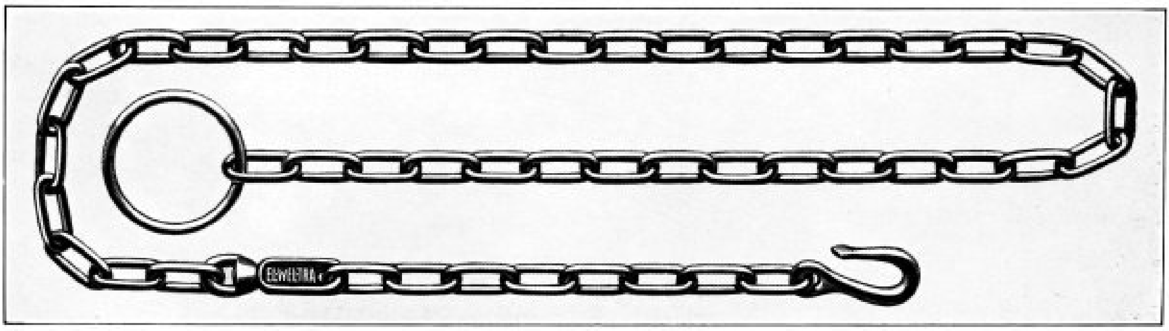
Attachments: Ring, Hook, T Hook or T Bar.
Furnished with Rings unless otherwise ordered.

Finishes: Bright, Japanned, Electro Galvanized or Electro Copper Plated.
Furnished Bright unless otherwise ordered.

Packing: 6 pairs of one size in a bag and 17 bags (102 pairs) in a barrel. 102 pairs of a size will be supplied when the quantities are specified as "barrels."

Stake Chains

EL-WEL-TRA



These chains are furnished with a $\frac{5}{16}$-inch by 3-inch inside diameter Ring, EL-WEL-TRA Swivel and Hook.

List of Sizes

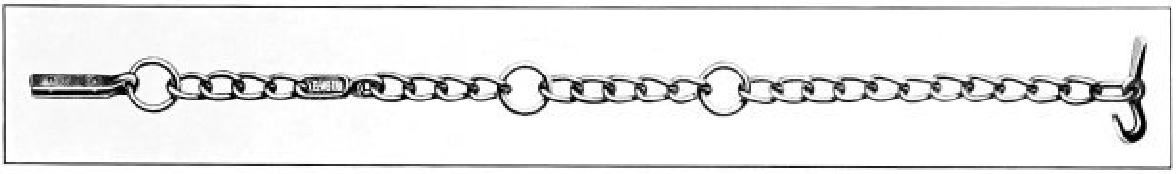
Length Over All Feet	Exact Number Links per Foot	Size of Material		Approximate Shipping Weight per 102 Pairs Pounds
		Gauge	Inch	
6½	8	2	$\frac{1}{4}$	710
6½	8	1	$\frac{9}{32}$	915
6½	10	2	$\frac{1}{4}$	755
6½	10	1	$\frac{9}{32}$	945

Made in Straight Link only Furnished Bright Finish

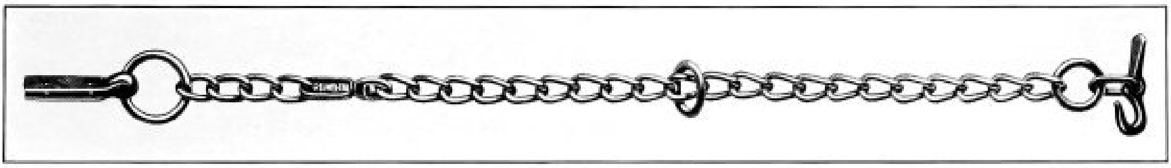
Packing: 6 pairs in a bag and 17 bags (102 pairs) in a barrel.

Stage Traces

EL-WEL-TRA



Regular Pattern



Buckeye Pattern
(With Sliding Ring)

Approximate Weight per Dozen Pairs—Pounds

Length of Chain—Inches	24	30	36	42
8 Links per foot, No. 2 ($\frac{1}{4}$-inch)	44	50	55	61
10 Links per foot, No. 2 ($\frac{1}{4}$-inch)	45	51	57	63
8 Links per foot, No. 1 ($\frac{9}{32}$-inch)	49	56	64	72
10 Links per foot, No. 1 ($\frac{9}{32}$-inch)	50	58	66	74

Furnished Twist Link, unless ordered Straight Link.

If ordered with "Snap attached to Ring," the end ring will be welded into the heel of the snap and no clips furnished.

Regular Pattern: All rings are $1\frac{1}{2}$ inches inside diameter, made from $\frac{5}{16}$-inch material.

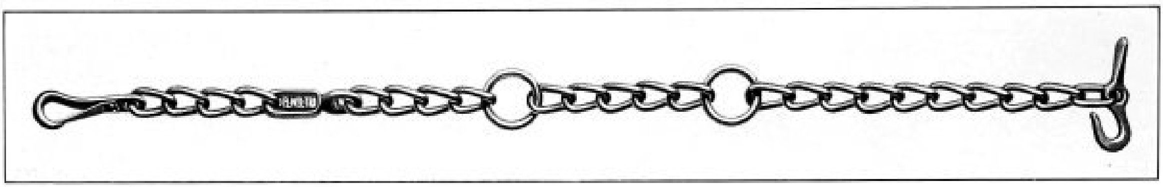
Buckeye Pattern: The large end ring is $2\frac{1}{4}$ inches inside diameter, made from $\frac{3}{8}$-inch material. Sliding ring and small end ring are $1\frac{1}{2}$ inches inside diameter, made from $\frac{5}{16}$-inch material.

Finish: Bright unless otherwise ordered.

Packing: 1 dozen pairs in a bag, 12 dozen pairs in a barrel.

Stage Traces

EL-WEL-TRA



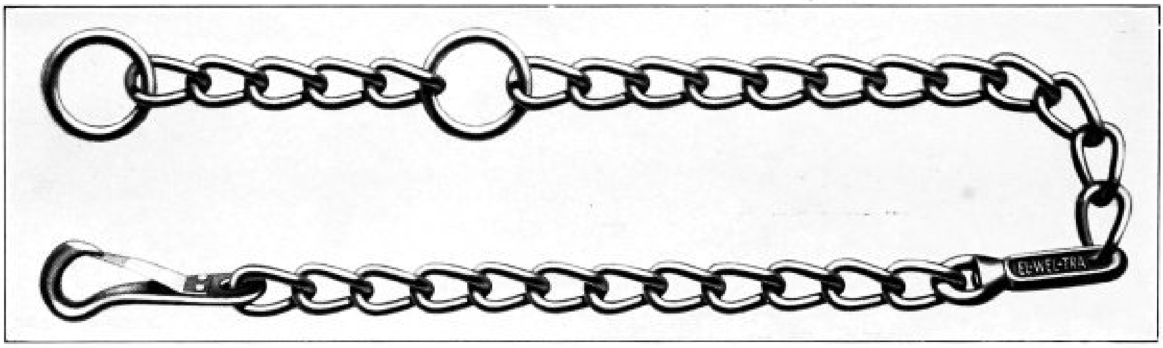
Pennsylvania Pattern

Rings are 1½ inches inside diameter, made from $\frac{5}{16}$-inch material

Approximate Weight per Dozen Pairs—Pounds				
Length of Chain—Inches	24	30	36	42
8 Links per foot, No. 2 ($\frac{1}{4}$-inch)	42	48	53	59
*10 Links per foot, No. 2 ($\frac{1}{4}$-inch)	43	49	55	61
8 Links per foot, No. 1 ($\frac{9}{32}$-inch)	47	54	62	70
*10 Links per foot, No. 1 ($\frac{9}{32}$-inch)	48	56	64	72

*These Chains are also designated as 12 links to the foot.

Regularly supplied Bright Finish and Twist Link unless ordered Straight Link. When ordered with "Snap, Ring and Clip," the above pattern will be supplied and a Ring and Clip for each chain, not attached, will be furnished.



Yankee Pattern

Rings are 1½ inches inside diameter, made from $\frac{5}{16}$-inch material

Approximate Weight per Dozen Pairs—Pounds				
Length of Chain—Inches	24	30	36	42
*10 Links per foot, No. 2 ($\frac{1}{4}$-inch)	40	46	52	58

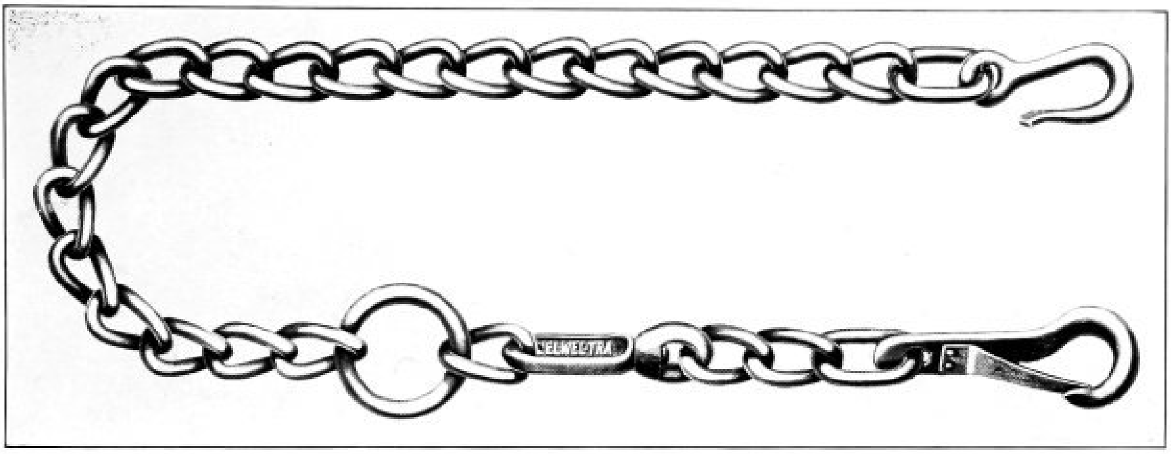
*These Chains are also designated as 12 links to the foot.

Regularly supplied Bright Finish and Twist Link only. Also furnished without Snaps or with three 2½-inch End Links.

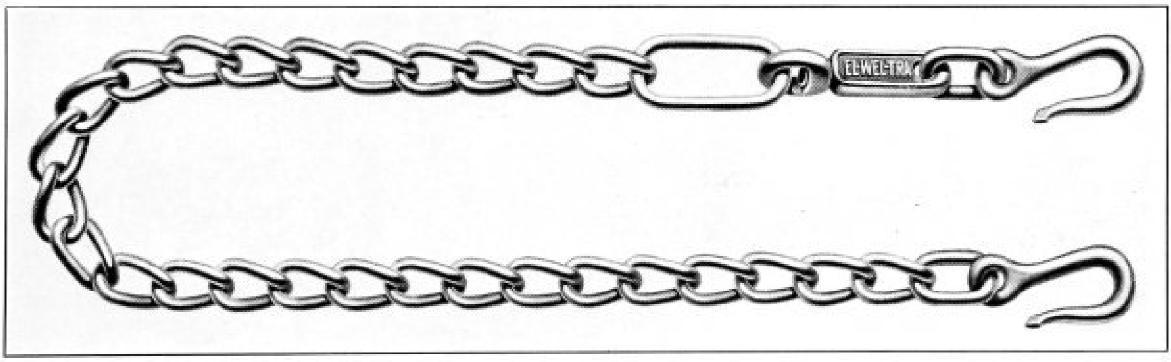
Packing: 1 dozen pairs in a bag, 12 dozen pairs in a barrel.

Stage Traces

EL-WEL-TRA



North Jersey Pattern



South Jersey Pattern

Approximate Weight per Dozen Pairs—Pounds

Length of Chain—Inches	30	36	42
*10 Links per foot, No. 2 ($\frac{1}{4}$-inch)	31	37	43

* These Chains are also designated as 12 links to the foot.

Regularly supplied Bright Finish and Twist Link only.

North Jersey Pattern: Rings are $1\frac{3}{4}$ inches inside diameter, made from $\frac{5}{16}$-inch material.

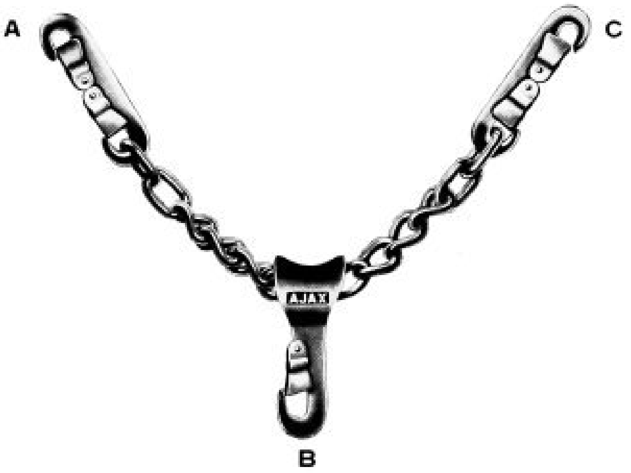
South Jersey Pattern: Large link is $\frac{3}{4}$ x $2\frac{1}{2}$ inches inside, made from material $\frac{1}{32}$ inch heavier than material in body of chain.

Packing: 1 dozen pairs in a bag, 12 dozen pairs in a barrel.

Ajax Breast Chains

("Ajax" Reg. U. S. Pat. Off.)

No. 154



Made from $\frac{9}{32}$-inch Material.

How to Measure Ajax Breast Chains

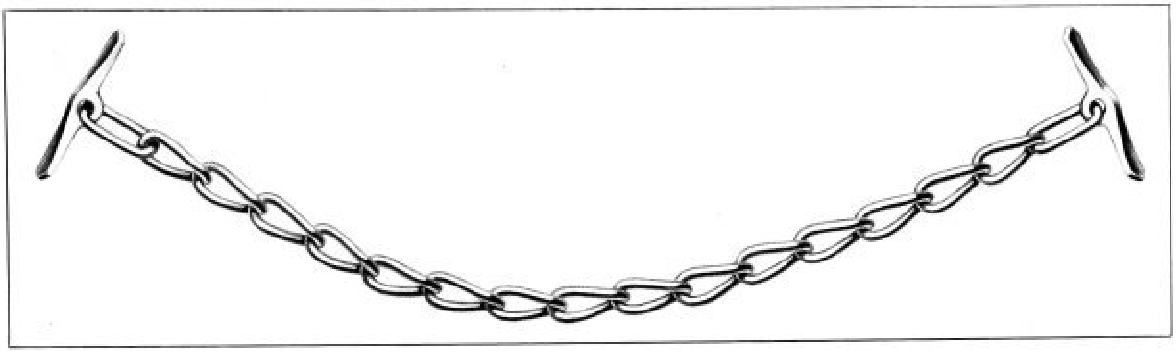
Place the chain, with snaps attached, on a flat surface in same position as when in use. See above illustration. Add measurements from "A" to "B" and from "B" to "C," which will give correct length.

Trade Size or Length of Breast Chain Complete	Approximate Weight per Dozen Pairs	Pairs in Carton	Dozen Pairs in Case
28 inches	56 pounds	2	6
32 inches	62 pounds	2	6
36 inches	67 pounds	2	6
40 inches	73 pounds	2	5
44 inches	80 pounds	2	5
48 inches	86 pounds	2	5

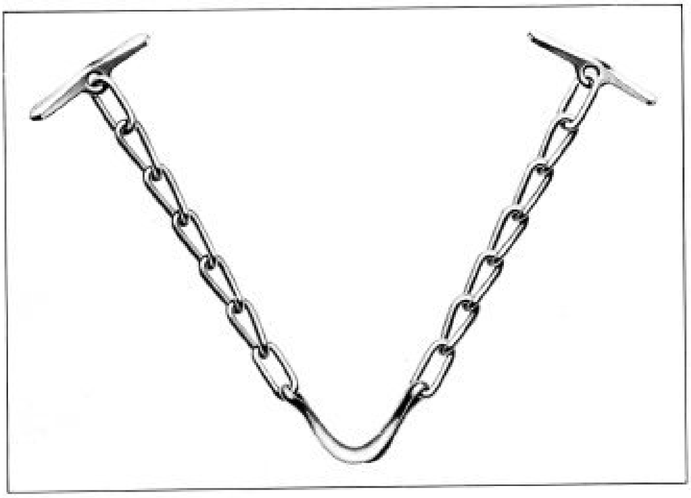
Finishes: Polished, XC Plate or Imitation Rubber.

Elwel Breast Chains—Single

No. 155



No. 156



Single—with Slide

Approximate Weight per Dozen Pairs—Pounds

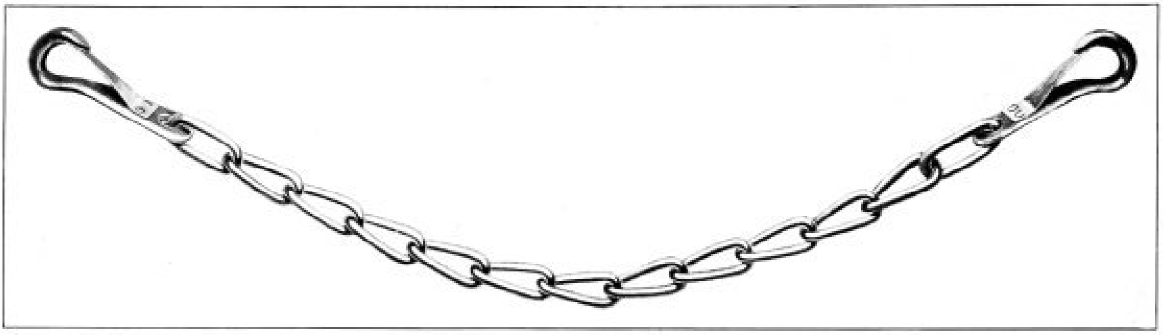
Length of Chain—Inches	26	28	30	32	36
8 Links per foot, No. 2 ($\frac{1}{4}$ -inch)	32	34	35	36	38
10 Links per foot, No. 2 ($\frac{1}{4}$ -inch)	35	38	40	41	43
8 Links per foot, No. 1 ($\frac{9}{32}$-inch)	41	42	46	49	52
10 Links per foot, No. 1 ($\frac{9}{32}$-inch)	43	44	50	51	53
8 Links per foot, No. 0 ($\frac{5}{16}$-inch)	51	53	58	54	56
10 Links per foot, No. 0 ($\frac{5}{16}$-inch)	52	56	60	59	61

Regularly supplied Bright Finish

Packing: No.155: 1 dozen pairs in a bag; 17 dozen pairs in a barrel. No.156, in bulk

Elwel Breast Chains—Single

No. 158



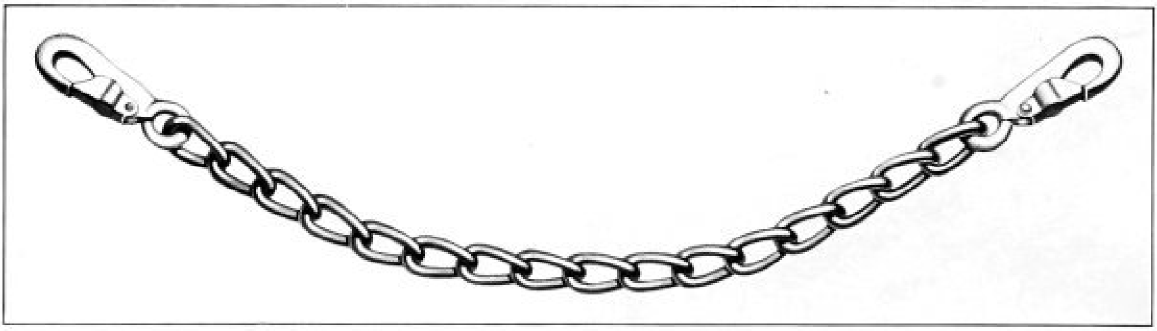
Bright Finish Only

Approximate Weight per Dozen Pairs—Pounds

Length of Chain—Inches	26	28	30	32	36
8 Links per foot, No. 2 ($\frac{1}{4}$-inch)	25	26	29	31	34
10 Links per foot, No. 2 ($\frac{1}{4}$-inch)	27	29	31	33	36
8 Links per foot, No. 1 ($\frac{9}{32}$-inch)	31	33	37	39	44
10 Links per foot, No. 1 ($\frac{9}{32}$-inch)	33	36	38	43	49
8 Links per foot, No. 0 ($\frac{5}{16}$-inch)	38	41	46	51	57
10 Links per foot, No. 0 ($\frac{5}{16}$-inch)	40	45	47	54	60

Packing: 1 dozen pairs in a bag; 17 dozen pairs in a barrel.

No. 160



Furnished XC Plated (Hot Tinned) or Bright Finish

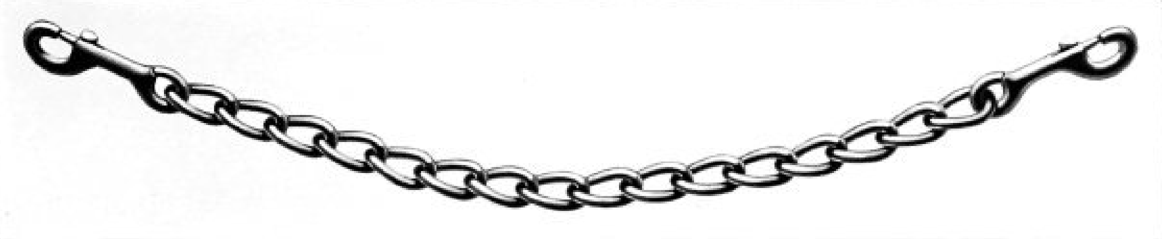
Approximate Weight per Dozen Pairs—Pounds

Length of Chain—Inches	28	30	32	36	40	44
No. 1 ($\frac{9}{32}$-inch)	40	44	46	52	58	63
No. 0 ($\frac{5}{16}$-inch)	50	52	57	66	73	80

Packing: 1 dozen pairs in a bag; 17 dozen pairs in a barrel.

Elwel Breast Chains—Single

No. 170



Furnished XC Plated (Hot Tinned) or Bright Finish

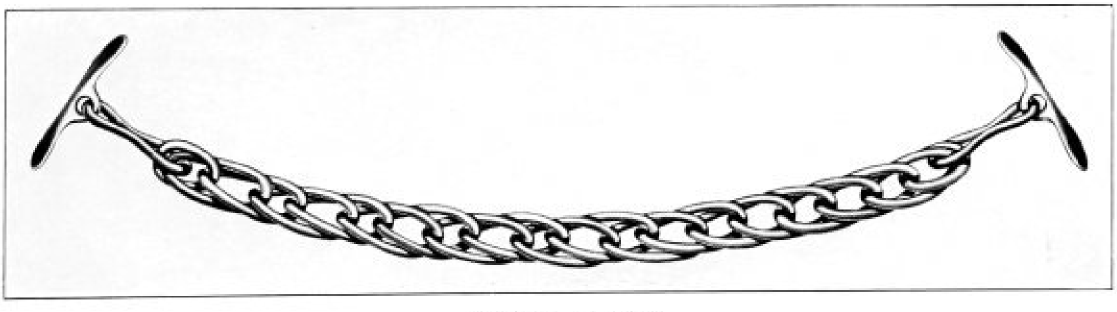
Approximate Weight per Dozen Pairs—Pounds

Length of Chain—Inches	28	30	32	36	40	44
No. 1 ($\frac{9}{32}$-inch)	43	47	50	56	60	68
No. 0 ($\frac{5}{16}$-inch)	53	55	60	67	76	82

Packing: 1 dozen pairs in a bag; 17 dozen pairs in a barrel.

Elwel Breast Chains—Double Slack

No. 175



Bright Finish

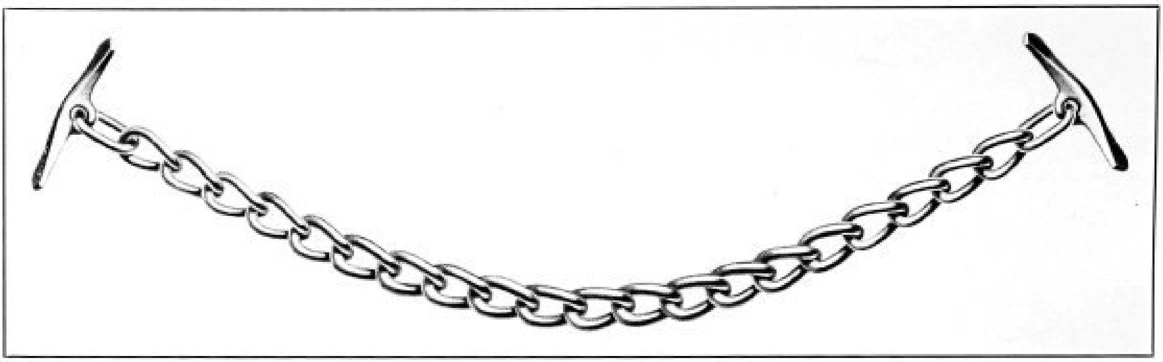
Approximate Weight per Dozen Pairs—Pounds

Length of Chain—Inches	26	28	30	32	36
Regular Pattern ($\frac{7}{32}$-inch)	40	42	45	47	50
Heavy Pattern ($\frac{1}{4}$-inch)	53	56	60	63	67

Packing: 1 dozen pairs in a bag; 13 dozen pairs in a barrel.

Elwel Breast Chains—Tapered

No. 180



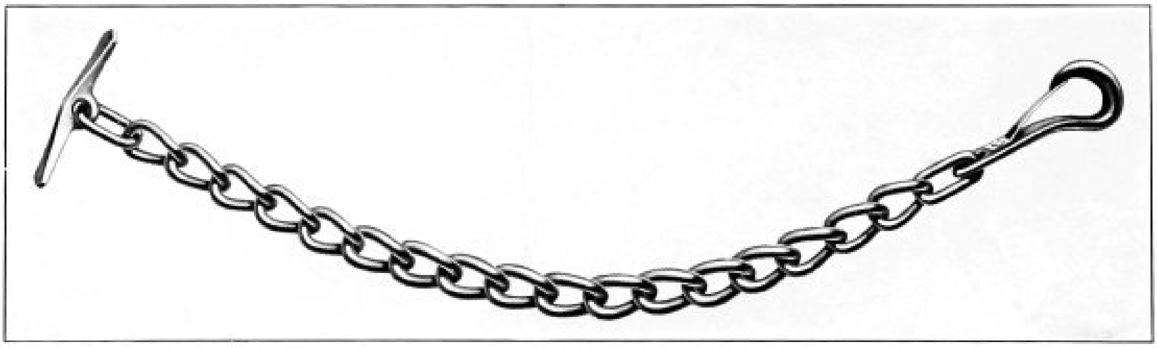
Bright Finish

Approximate Weight per Dozen Pairs—Pounds

Length of Chain — Inches	24	27	30	32
Tapered $\frac{5}{16}$ inch to $\frac{1}{4}$ inch "T and T" (Two T Bars)	38	45	52	59
Tapered $\frac{3}{8}$ inch to $\frac{5}{16}$ inch "T and T" (Two T Bars)	...	61	71	78

Packing: 1 dozen pairs in a bag.

No. 185



Bright Finish

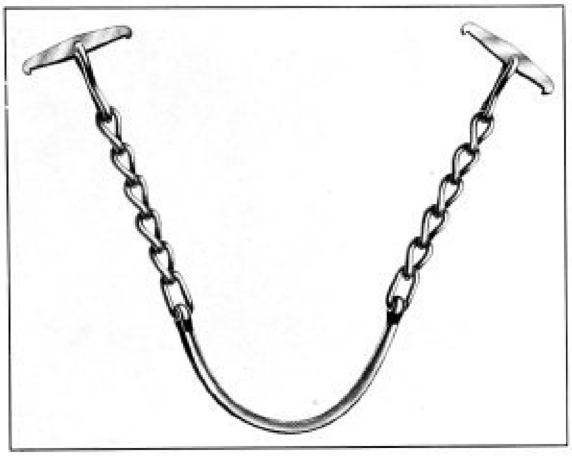
Approximate Weight per Dozen Pairs—Pounds

Length of Chain — Inches	24	27	30	32
Tapered $\frac{5}{16}$ inch to $\frac{1}{4}$ inch "T and S" (T Bar and Snap)	38	45	52	59
Tapered $\frac{3}{8}$ inch to $\frac{5}{16}$ inch "T and S" (T Bar and Snap)	...	61	71	78

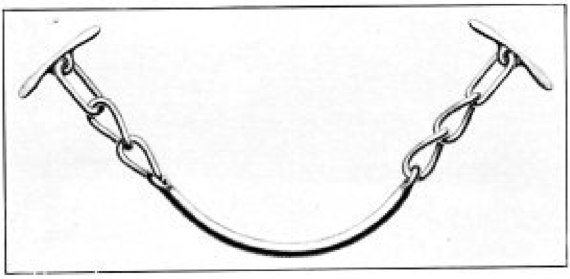
Also furnished with two Snaps.

Packing: 1 dozen pairs in a bag.

Elwel Breast Chains



Hayden Bow Pattern—Nos. 190 and 191



Rothrock Pattern—No. 195

Approximate Dimensions and Weights

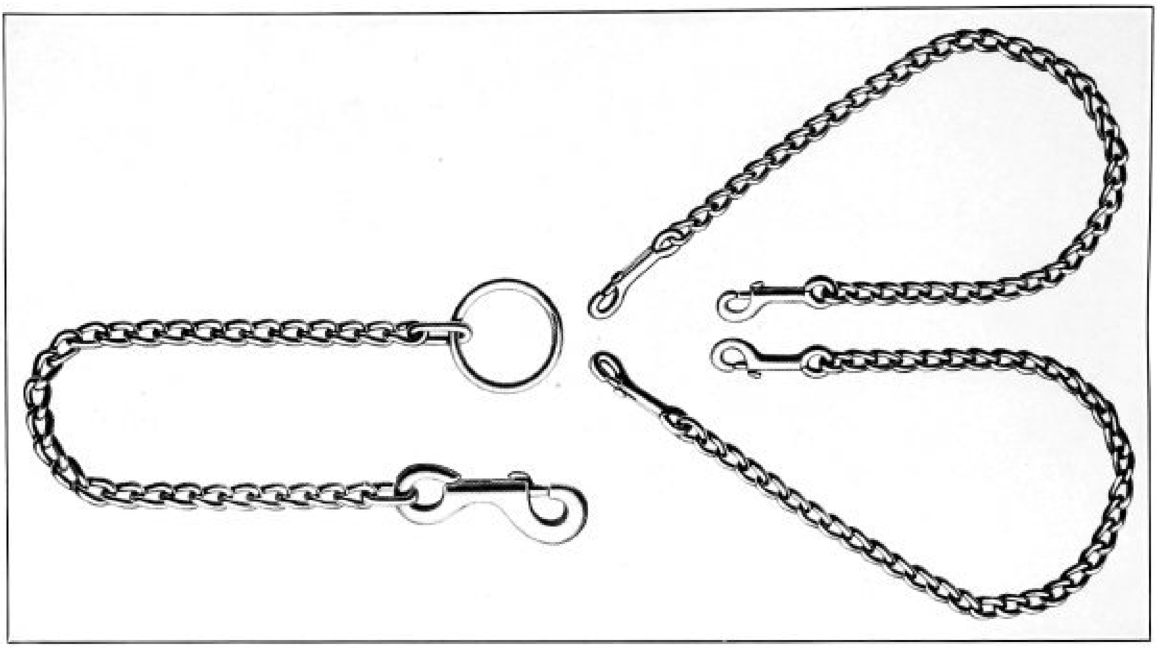
Trade Number	Length of Chain Over All Inches	Size Material In Links	Size Material In Bow Inches	Length of Bow Inches	Distance between Eyes of Bow Inches	Approximate Weight per Dozen Pairs Pounds
190	36	No. 1 ($\frac{9}{32}$)	$\frac{7}{8}$ Half Round	16	8½	77
191	32	No. 2 ($\frac{1}{4}$)	$\frac{7}{8}$ Half Round	16	8½	56
195	26	No. 0 ($\frac{5}{16}$)	$\frac{5}{8}$ Round	14	10	56

Packing: In Bulk

Supplied Bright Finish and Twist Link

Elwel Pole and Flank Chains

Dixie Pattern



These Chains take the place of Pole and Flank Straps for hold-back purposes

Dixie Pole Chains—Bright Finish

Length over all, 34 inches. Heavy XC Bolt Snap on one end and $\frac{5}{16}$-inch x $2\frac{1}{2}$ inches, inside diameter, Ring on other end of Chain. Approximate Weight, 20 pounds per dozen.

Packing: 1 dozen in a bag.

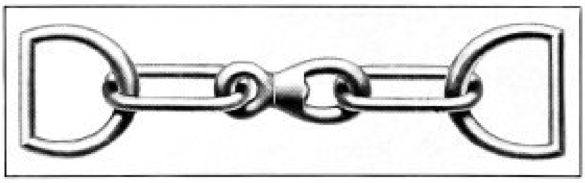
Dixie Flank Chains—Bright Finish

Length over all, 32 inches. XC $3\frac{1}{4}$-inch Bolt Snaps on each end of Chain. Two Flank Chains are used with each Pole Chain. Approximate Weight, 20 pounds per dozen pairs.

Packing: 1 dozen pairs in a bag.

Elwel Hobble Chains

Coast Pattern—Bright Finish

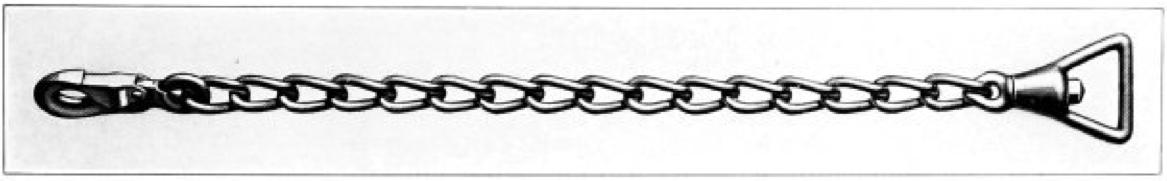


10 inches long, $1\frac{1}{2}$-inch Dee, No. 2 ($\frac{1}{4}$-inch), approximate weight per dozen $6\frac{1}{2}$ pounds.
10 inches long, $1\frac{3}{4}$-inch Dee, No. 0 ($\frac{5}{16}$-inch), approximate weight per dozen 10 pounds.
Dees for No. 2 ($\frac{1}{4}$-inch) Hobble Chains are made from $\frac{5}{16}$-inch material, No. 0 ($\frac{5}{16}$-inch) from $\frac{11}{32}$-inch material.

Packing: 1 dozen in a bag.

Scotch Rein Chains—Stallion Chains

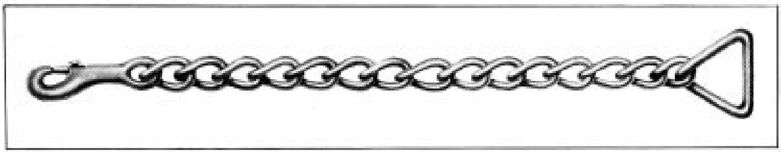
No. 140



Heavy English Pattern

Rein Chains

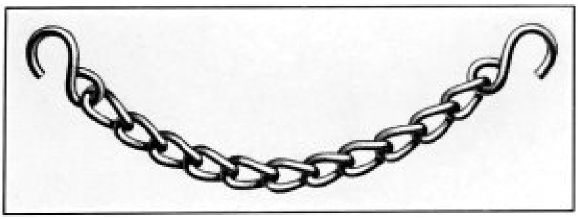
No. 141



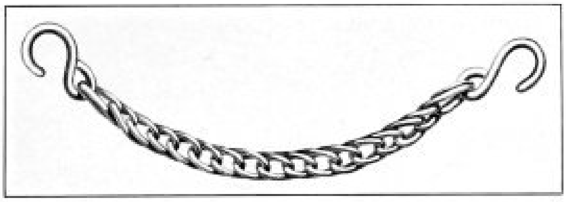
Trade Number	Length Inches	Size of Chain	Size of Dee Inches	Quantity in Carton Dozen	Quantity in Case Dozen	Approximate Weight per Dozen. Pounds
140	18	No. 6 ($\frac{3}{16}$-inch)	$1\frac{1}{4}$ Swivel	1	40	8
141	12	No. 9 ($\frac{9}{64}$-inch)	$1\frac{1}{8}$ Triangular	2	80	3
141	18	No. 9 ($\frac{9}{64}$-inch)	$1\frac{1}{8}$ Triangular	2	76	4
141	24	No. 9 ($\frac{9}{64}$-inch)	$1\frac{1}{8}$ Triangular	2	76	5

Furnished in XC Plate Finish only

Elwel Chin and Curb Chains



Single Link Pattern



Double Link Pattern

Trade Number	Size of Chain	Length Over All Inches	Size Material in S-Hook Inches	Finish	Approximate Weight per Dozen. Pounds
142	1/0 Long Twist Link	$12\frac{1}{2}$	$\frac{3}{16}$	Bright	3
143	2/0 Short Twist Link	$12\frac{1}{2}$	$\frac{3}{16}$	Bright	4
144	No. 9 Gauge Double Link	$12\frac{1}{2}$	$\frac{3}{16}$	Nickel-Plated	4

Packing: 1 dozen in a carton

Lazy Chains

Used for the same purpose as Lazy Straps, carrying the Trace when at ease, suspended from the Breeching Ring.

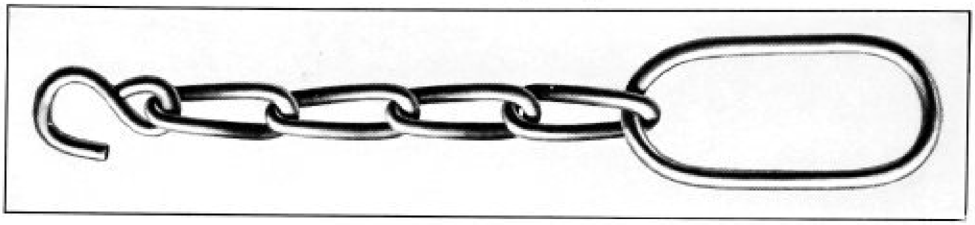


Illustration of No. 14

Slip the Trace or Chain through the large link, and attach S Hook to Breeching Ring.

Trade Number	11	12	13	14	15	16
Number of Twist Links	1	2	3	4	5	6
Over-all Length—Inches	6¼	7¾	9¼	10¾	11¾	13

For the following types, leather Trace Carriers should be made to fit into 1-inch Dees. They have short connecting links, and may be drawn through the Breeching Ring and hooked back into any link, to give the length of Chain desired.

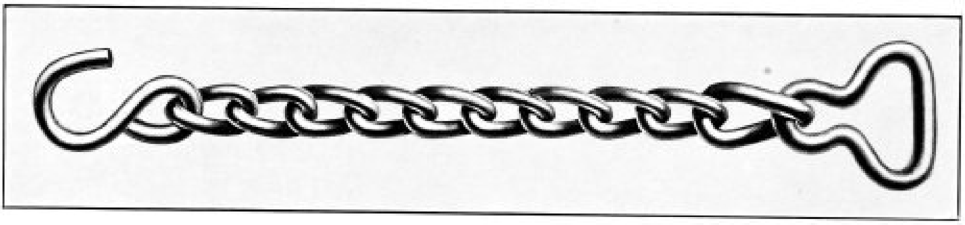


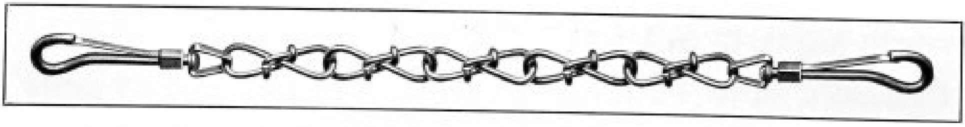
Illustration of No. 126

Trade Number	126	127	128	129
Number of Twist Links	9	10	12	14
Over-all Length—Inches	9¾	10¼	11¾	13

Furnished in Japanned Finish only. Average weight, 3 pounds per dozen.

Packing: 2 dozen in a carton.

Niagara Jockey Chains

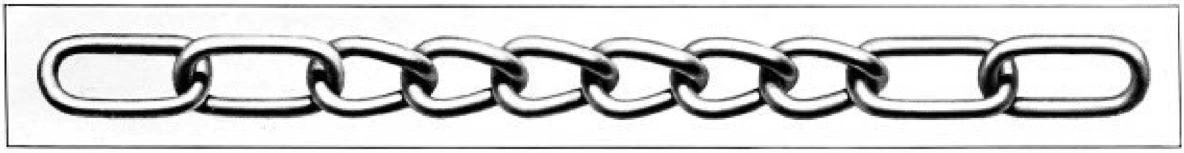


Trade Size	W & M Gauge Number	Number of Niagara Links	Approximate Weight per 100 Chains
12-inch	11	3	15 pounds
15-inch	11	5	19 pounds

Packing: 2 dozen in a carton.

Finish: Imitation Rubber and XC

Elwel Tug Chains



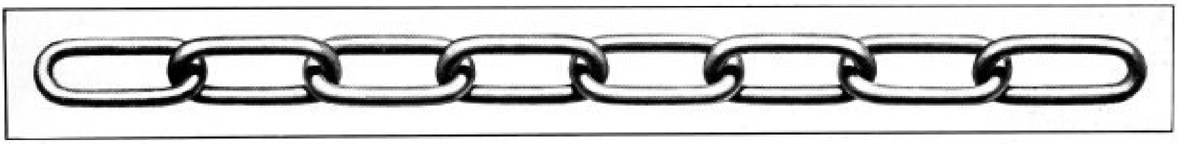
Regular Pattern—Twist Link

Inside dimensions of straight end links, $\frac{5}{8}$ inch x 2 inches

Bright Finish

Length of Chain—Inches	12	14	16	18
No. 2 ($\frac{1}{4}$-in.), Number of Twist Links	4	6	8	9
No. 1 ($\frac{9}{32}$-in.), Number of Twist Links	3	5	6	8
No. 2 ($\frac{1}{4}$-in.), Approximate Weight per doz. pairs in Pounds	12	14	17	18
No. 1 ($\frac{9}{32}$-in.), Approximate Weight per doz. pairs in Pounds	15	19	21	25

Packing: 1 dozen pairs in a bag.



Baltimore Pattern—Straight Link

Inside dimensions of links, $\frac{5}{8}$ inch x 2 inches

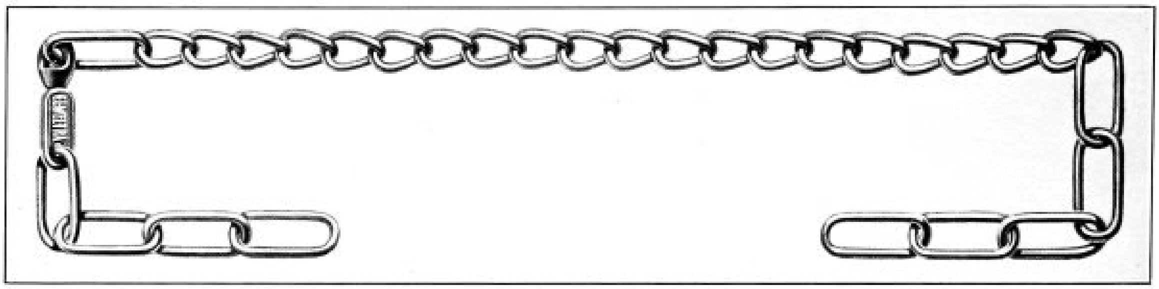
Bright Finish

Length of Chain—Inches	12	14	16	18
Number of Links in Chain	6	7	8	9
No. 2 ($\frac{1}{4}$-in.), Approximate Weight per doz. pairs in Pounds	11	13	14	16
No. 1 ($\frac{9}{32}$-in.), Approximate Weight per doz. pairs in Pounds	15	17	20	22
No. 0 ($\frac{5}{16}$-in.), Approximate Weight per doz. pairs in Pounds	17	20	22	25

Packing: 1 dozen pairs in a bag.

Cart Back Chains

EL-WEL-TRA



Single Pattern

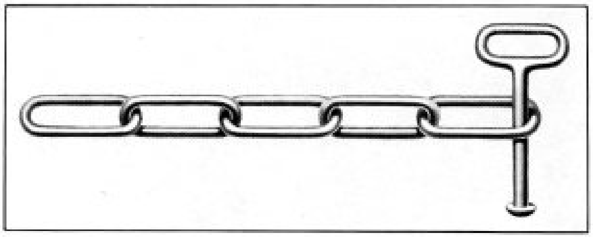
Inside dimensions of Straight End Links, $\frac{3}{4}$ x $2\frac{1}{2}$ inches. The sizes of wire indicated refer to Twist Links. The Straight End Links are made from material $\frac{1}{32}$-inch heavier than the Twist Links.

Approximate Weight per Dozen—Pounds

Length of Chain—Feet	4	$4\frac{1}{2}$
No. 1 ($\frac{9}{32}$-inch)	36	40
No. 0 ($\frac{5}{16}$-inch)	50	55
No. 00 ($\frac{3}{8}$-inch)	65	73

Packing: ½ dozen in a bag *Finish:* Bright

Elwel Cart Breeching Chains



Inside dimensions of links, $\frac{3}{4}$ x $2\frac{1}{2}$ inches. Furnished with Pins 2, $2\frac{1}{2}$, 3, $3\frac{1}{2}$, 4 and $4\frac{1}{2}$ inches long. Loops of all Pins are $1\frac{5}{8}$ inches inside.

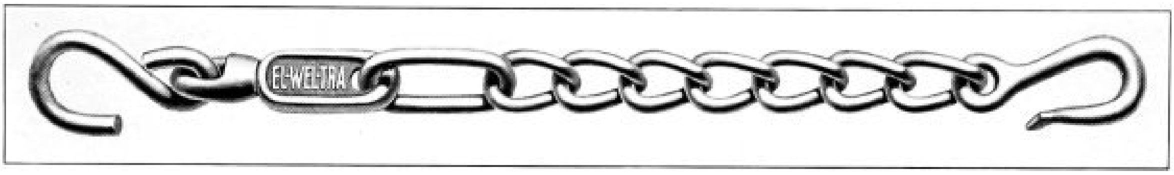
Approximate Weight per Dozen Pairs—Pounds
(Weights given are for Chains with 3-inch Pins)

Number of Links in Chain	5	6	7	8
No. 2 ($\frac{1}{4}$-inch)	15	16	17	18
No. 1 ($\frac{9}{32}$-inch)	19	22	25	28
No. 0 ($\frac{5}{16}$-inch)	22	26	29	33

Packing: 1 dozen pairs in a bag. *Finish:* Bright.

Elwel Heel Chains

No. 5



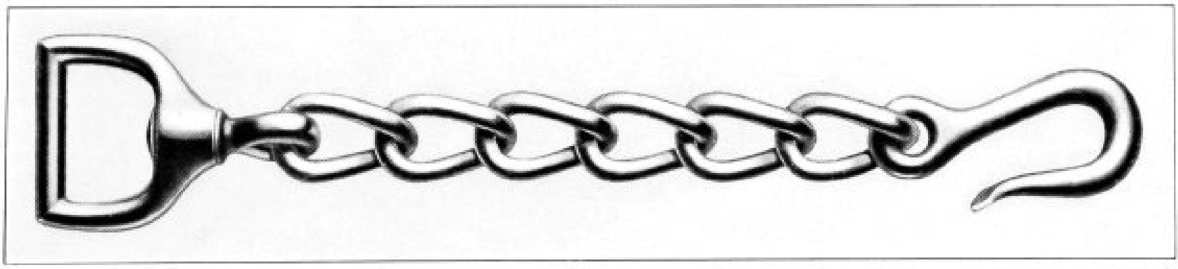
Wrought "S" Hook made from $\frac{3}{8}$-inch material. Large link $\frac{5}{8}$ x 2 inches inside, made from material $\frac{1}{32}$-inch heavier than balance of chain

Approximate Weight per Dozen Pairs—Pounds

Approximate Length over all—Inches	12	18	24	30	36
* No. 1 ($\frac{9}{32}$-inch) 9 links per foot	21	29	37	45	53
** No. 2 ($\frac{1}{4}$-inch) 10 links per foot	18	25	30	36	41

* These Chains are also designated as 10 links to the foot.
** These Chains are also designated as 12 links to the foot.

No. 8



Furnished with Dees $1\frac{1}{2}$, $1\frac{3}{4}$, 2, $2\frac{1}{4}$, $2\frac{1}{2}$ inches

Approximate Weight per Dozen Pairs—Pounds

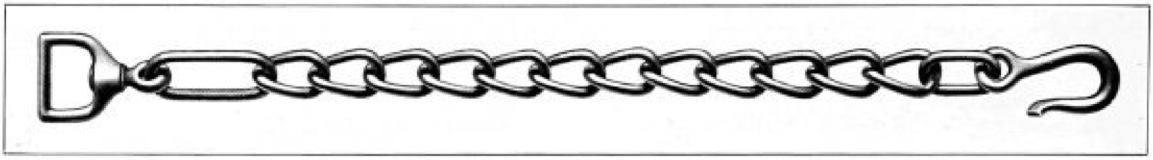
Approximate Length over all—Inches	12	18	24	30	36
* No. 1 ($\frac{9}{32}$-inch) 9 links per foot	24	32	40	48	56
** No. 2 ($\frac{1}{4}$-inch) 10 links per foot	21	28	33	39	44

* These Chains are also designated as 10 links to the foot.
** These Chains are also designated as 12 links to the foot.

Packing: 1 dozen pairs in a bag. *Finish:* Bright.

Elwel Heel Chains

No. 9



Large link $\frac{5}{8}$ x 2 inches inside, made from material $\frac{1}{32}$ inch heavier than balance of chain. Furnished with Dees $1\frac{1}{2}$, $1\frac{3}{4}$, 2, $2\frac{1}{4}$, $2\frac{1}{2}$ inches.

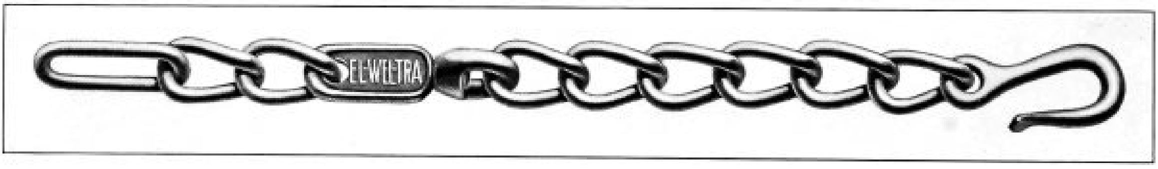
Approximate Weight per Dozen Pairs—Pounds

Approximate Length over all—Inches	12	18	24	30	36
*No. 1 ($\frac{9}{32}$-inch), 9 links per foot	24	32	40	48	56
**No. 2 ($\frac{1}{4}$-inch), 10 links per foot	21	28	33	39	44

*These Chains are also designated as 10 links to the foot.

**These Chains are also designated as 12 links to the foot.

No. 10



Size of end link $\frac{5}{8}$ x 2 inches inside, made from material $\frac{1}{32}$ inch heavier than balance of chain.

Approximate Weight per Dozen Pairs—Pounds

Approximate Length over all—Inches	12	18	24	30	36
*No. 1 ($\frac{9}{32}$-inch), 9 links per foot	20	28	36	44	52
**No. 2 ($\frac{1}{4}$-inch), 10 links per foot	17	24	29	35	40

*These Chains are also designated as 10 links to the foot.

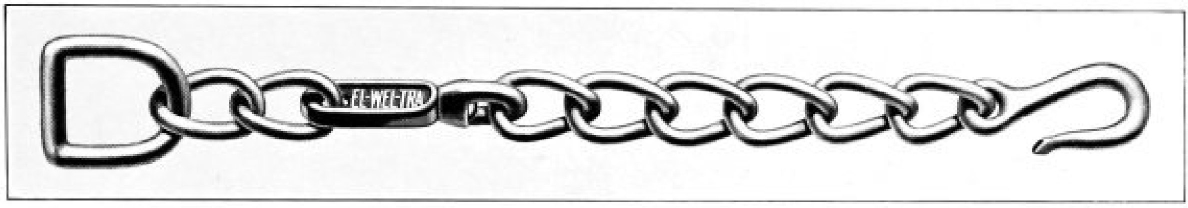
**These Chains are also designated as 12 links to the foot.

Packing: 1 dozen pairs in a bag.

Finish: Bright.

Elwel Heel Chains

No. 11



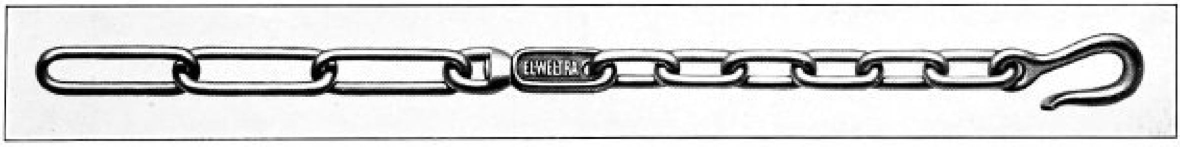
Wrought Dee made from ⅜-inch material. Furnished with Dees 1½, 1¾, 2, 2¼, 2½ inches.

Approximate Weight per Dozen Pairs—Pounds					
Approximate Length over all—Inches .	12	18	24	30	36
*No. 1 (9/32-inch), 9 links per foot . . .	23	31	39	47	55
**No. 2 (¼-inch), 10 links per foot . . .	20	27	32	38	43

*These chains are also designated as 10 links to the foot.

**These chains are also designated as 12 links to the foot.

No. 25



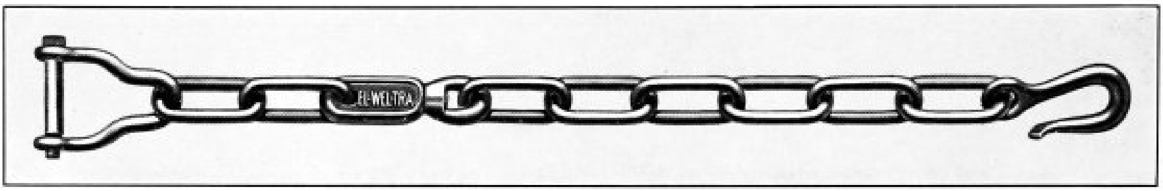
Long End Links ¾ x 3 inches inside. Short Links ½ x 1½ inches inside. 18-inch chain has two long end links only.

Approximate Weight per Dozen Pairs—Pounds				
Approximate Length over all—Inches	18	24	30	36
No. 0 (5/16-inch), 8 links per foot	30	38	47	56
No. 1 (9/32-inch), 8 links per foot	25	32	40	47
No. 2 (¼-inch), 8 links per foot	20	25	31	36

Packing: 1 dozen pairs in a bag. *Finish:* Bright.

Elwel Heel Chains

No. 35

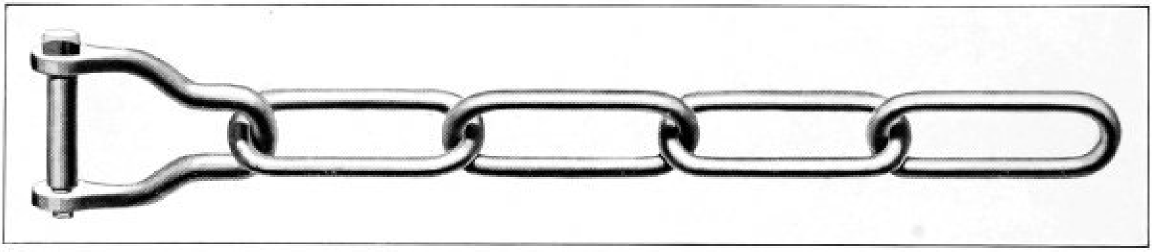


Furnished with Dees 1½, 1¾, 2, 2¼, 2½ inches. Links ⅝ x 2 inches inside.

Approximate Weight per Dozen Pairs—Pounds

Approximate Length over all—Inches	18	24	30	36
Total Number of Links	5	8	11	14
No. 0 ($\frac{5}{16}$-inch)	35	44	53	62
No. 1 ($\frac{9}{32}$-inch)	31	38	45	53

No. 40



Furnished with Dees 1½, 1¾, 2, 2¼, 2½ inches. Links ¾ x 2½ inches inside.

Approximate Weight per Dozen Pairs—Pounds

Number of Links in Chain	4	6	8	10
No. 00 ($\frac{3}{8}$-inch)	32	43	53	64
No. 0 ($\frac{5}{16}$-inch)	25	32	39	46
No. 1 ($\frac{9}{32}$-inch)	23	28	34	40

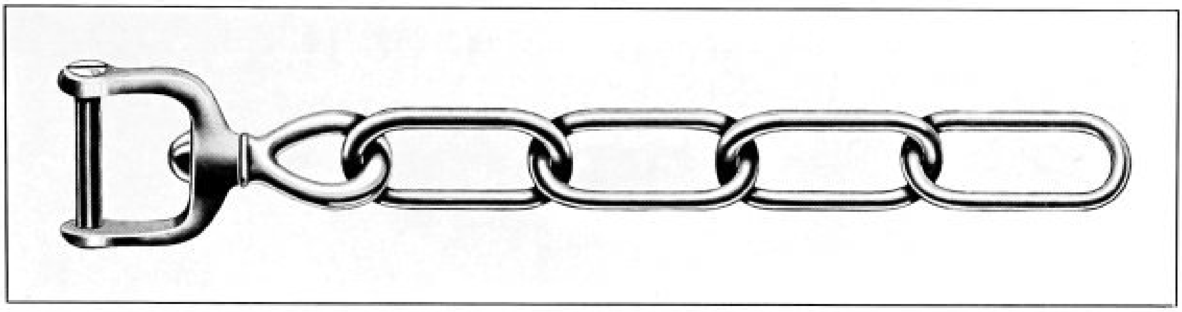
No. 41

Same as No. 40 except with Links ¾ x 3 inches inside

Packing: 1 dozen pairs in a bag. *Finish:* Bright.

Elwel Heel Chains

No. 45



Furnished with Dees $1\frac{1}{4}$, $1\frac{1}{2}$, $1\frac{3}{4}$, 2, $2\frac{1}{4}$, $2\frac{1}{2}$ inches. Links $\frac{3}{4}$ x $2\frac{1}{2}$ inches inside.

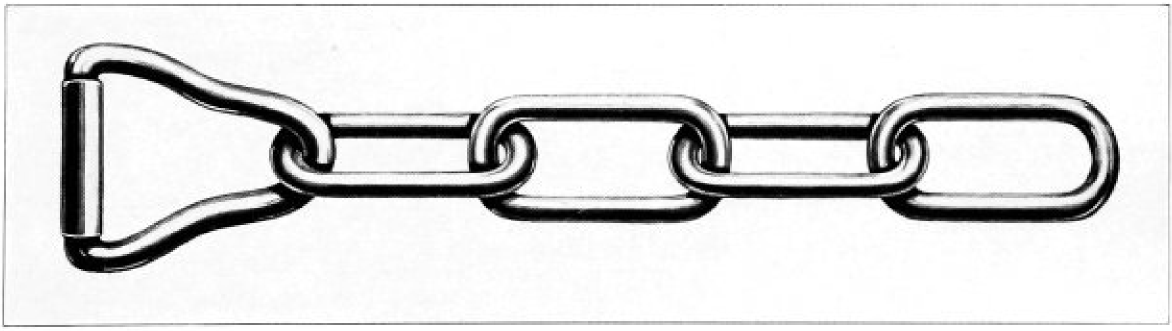
Approximate Weight per Dozen Pairs—Pounds

Number of Links in Chain	4	5	6	7	8	10
$\frac{3}{8}$-inch (No. 00)	31	35	41	46	52	62
$\frac{5}{16}$-inch (No. 0)	23	27	30	34	37	44
$\frac{9}{32}$-inch (No. 1)	21	24	27	30	33	39
$\frac{1}{4}$-inch (No. 2)	18	20	22	24	26	30

No. 46

Same as No. 45 except with Links $\frac{3}{4}$ x 3 inches inside

No. 50



Furnished with Dees $1\frac{1}{2}$, $1\frac{3}{4}$, 2, $2\frac{1}{4}$, $2\frac{1}{2}$ inches. Links $\frac{3}{4}$ x $2\frac{1}{2}$ inches inside.

Approximate Weight per Dozen Pairs—Pounds

Number of Links in Chain	4	5	6	7	8	10
$\frac{3}{8}$-inch (No. 00)	26	31	37	42	47	58
$\frac{5}{16}$-inch (No. 0)	19	22	26	29	33	40
$\frac{9}{32}$-inch (No. 1)	17	19	22	25	28	34

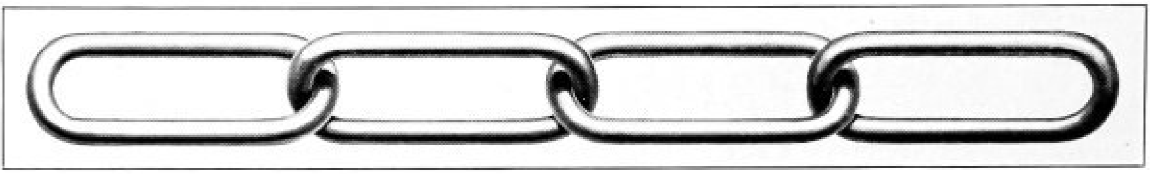
No. 51

Same as No. 50 except with Links $\frac{3}{4}$ x 3 inches inside

Packing: 1 dozen pairs in a bag. *Finish:* Bright.

Elwel Heel Chains

No. 52



Links ¾ x 2½ inches inside

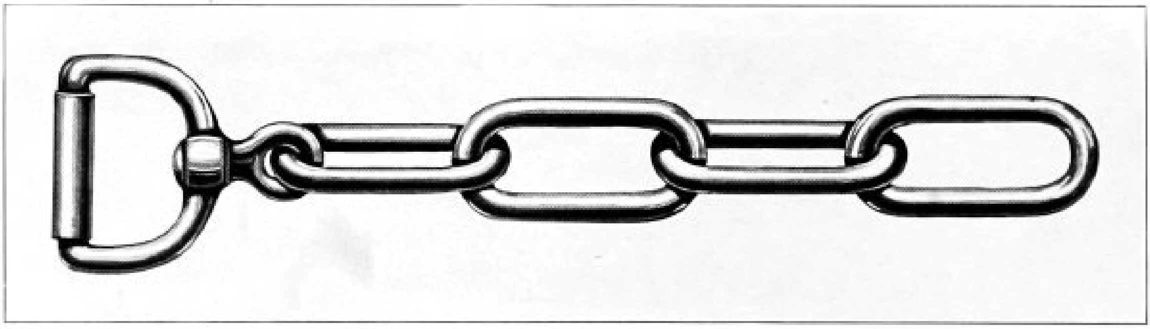
Approximate Weight per Dozen Pairs—Pounds

Number of Links in Chain	4	5	6	7	8	10
3/8-inch (No. 00)	22	28	33	39	44	55
5/16-inch (No. 0)	14	18	21	25	28	35
9/32-inch (No. 1)	12	15	17	20	23	29

No. 53

Same as No. 52 except with Links ¾ x 3 inches inside

No. 55



Furnished with Dees 1½, 1¾, 2, 2¼, 2½ inches. Links ¾ x 2½ inches inside

Approximate Weight per Dozen Pairs—Pounds

Number of Links in Chain	4	5	6	8	10
3/8-inch (No. 00)	29	34	39	50	60
5/16-inch (No. 0)	22	25	28	35	42
9/32-inch (No. 1)	19	22	25	31	36

No. 56

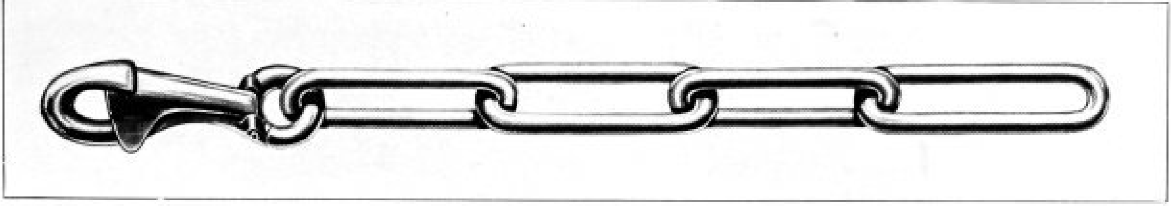
Same as No. 55 except with Links ¾ x 3 inches inside

Packing: 1 dozen pairs in a bag. *Finish:* Bright.

Elwel Heel Chains

No. 57

Handy Heel or Trace Chain

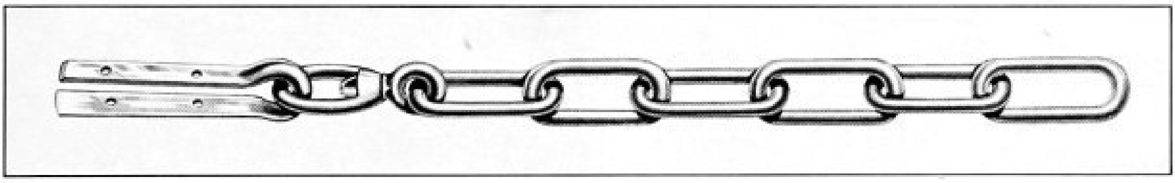


Links $\frac{3}{4}$ x 3 inches inside

Approximate Weight per Dozen Pairs—Pounds

Number of Links in Chain	4	6
No. 0 ($\frac{5}{16}$-inch)	24	32
No. 1 ($\frac{9}{32}$-inch)	20	27

No. 60



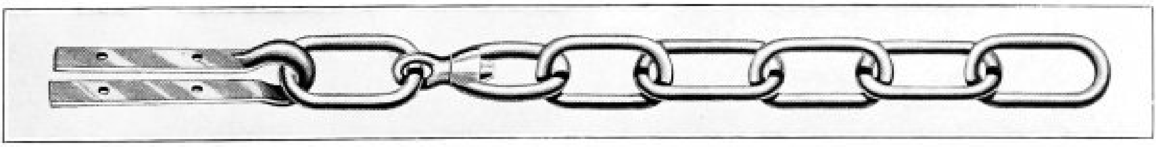
Links $\frac{5}{8}$ x 2 inches inside

Approximate Weight per Dozen Pairs—Pounds

Length of Chain, including Swivel—Inches	*14	16	18	24	30
Number of Links in Chain	6	7	8	11	14
No. 0 ($\frac{5}{16}$-inch)	27	30	33	41	50
No. 1 ($\frac{9}{32}$-inch)	24	26	29	36	43
No. 2 ($\frac{1}{4}$-inch)	19	21	23	28	33

*This size has heretofore been known as 12 inches

No. 61

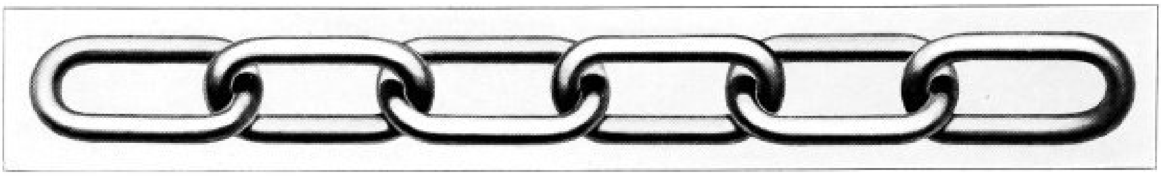


Links $\frac{5}{8}$ x 2 inches inside. Same as No. 60, except as to position of swivel.

Packing: 1 dozen pairs in a bag. *Finish:* Bright.

Elwel Heel Chains

No. 63

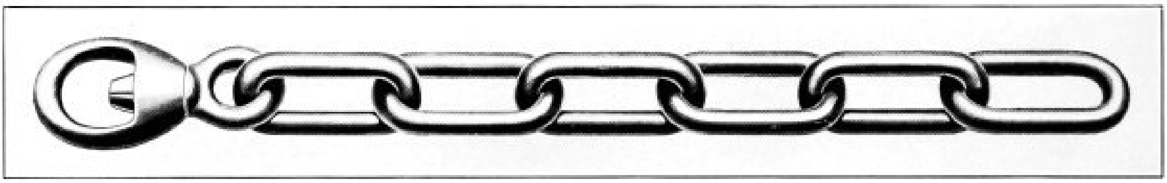


Links $\frac{5}{8}$ x $1\frac{3}{4}$ inches inside

Approximate Weight per Dozen Pairs—Pounds

Number of Links in Chain	5	6	7	8	9	10
No. 0 ($\frac{5}{16}$-inch)	13	16	18	21	24	26
No. 1 ($\frac{9}{32}$-inch)	10	12	14	16	18	20
No. 2 ($\frac{1}{4}$-inch)	9	11	13	14	16	18

No. 64

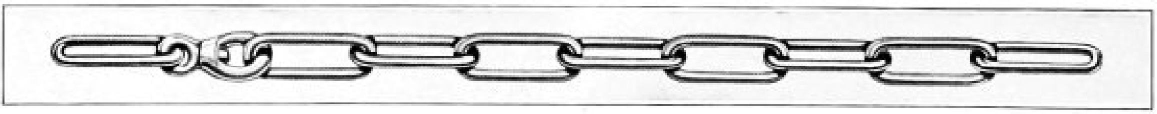


Links $\frac{5}{8}$ x $1\frac{3}{4}$ inches inside

Approximate Weight per Dozen Pairs—Pounds

Approximate Length over all—Inches	10	12	14	16	18	24	30
Number of Links in Chain	5	6	7	8	9	13	16
No. 0 ($\frac{5}{16}$-inch)	19	21	24	27	29	40	48
No. 1 ($\frac{9}{32}$-inch)	15	16	18	20	22	30	36
No. 2 ($\frac{1}{4}$-inch)	12	14	16	18	19	26	31

No. 65



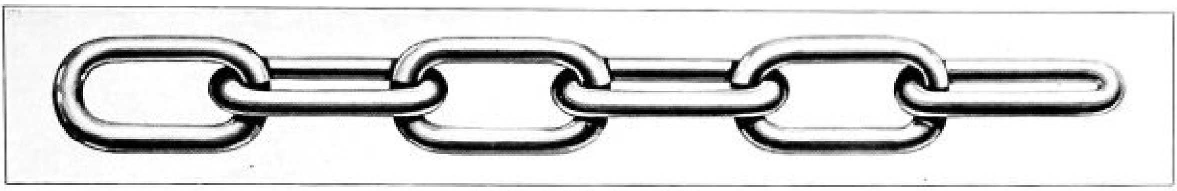
Links $\frac{5}{8}$ x $1\frac{3}{4}$ inches inside

Same as No. 64 except as to position of swivel

Packing: 1 dozen pairs in a bag. *Finish:* Bright.

Elwel Heel Chains

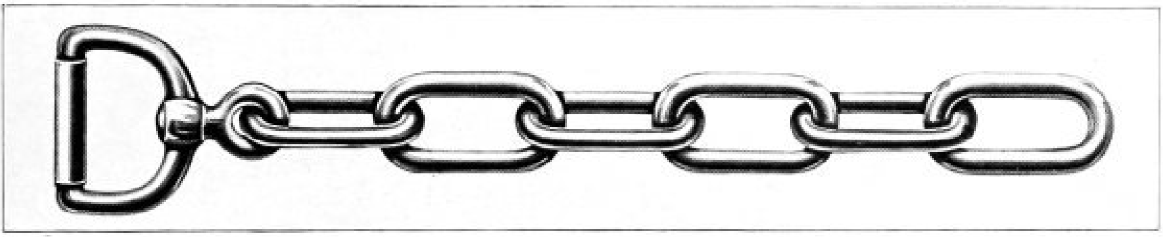
No. 66



Links ⅝ x 2 inches inside

Approximate Weight per Dozen Pairs—Pounds							
Approximate Length over all—Inches	10	12	14	16	18	24	30
Number of Links in Chain	5	6	7	8	9	12	15
No. 0 (5/16-inch)	15	17	20	22	25	34	42
No. 1 (9/32-inch)	12	15	17	20	22	29	36
No. 2 (¼-inch)	9	11	13	14	16	22	27

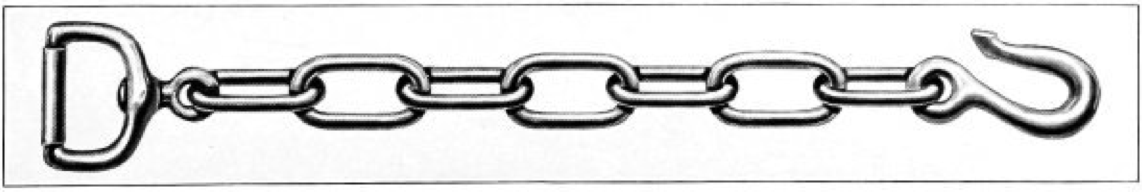
No. 80



Furnished with Dees 1½, 1¾, 2, 2¼, 2½ inches. Links ⅝ x 2 inches inside.

Approximate Weight per Dozen Pairs—Pounds				
Approximate Length over all—Inches	*14	18	24	30
Number of Links in Chain	6	8	11	14
No. 0 (5/16-inch)	26	32	40	49
No. 1 (9/32-inch)	23	28	35	43
No. 2 (¼-inch)	20	23	29	34

No. 81



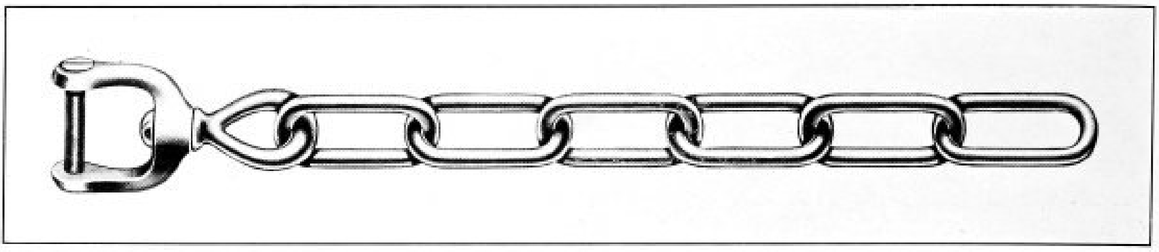
Furnished with Dees 1½, 1¾, 2, 2¼, 2½ inches. Links ⅝ x 2 inches inside.

Approximate Weight per Dozen Pairs—Pounds				
Approximate Length over all—Inches	*14	18	24	30
Number of Links in Chain	5	7	10	13
No. 0 (5/16-inch)	29	35	43	52
No. 1 (9/32-inch)	27	32	39	46
No. 2 (¼-inch)	24	28	33	38

*This size has heretofore been known as 12 inches. *Packing:* 1 dozen pairs in a bag. *Finish:* Bright

Elwel Heel Chains

No. 85

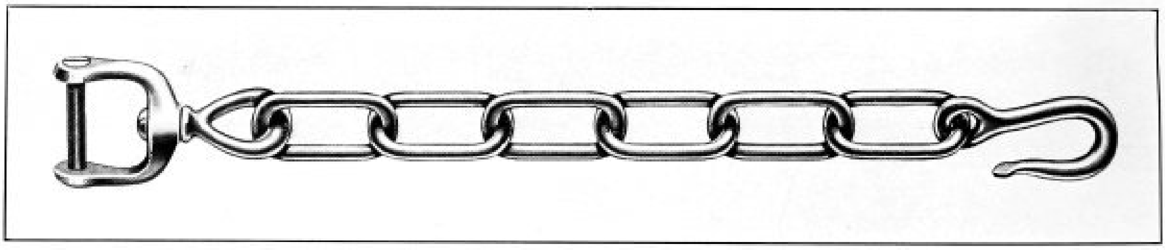


Furnished with Dees 1½, 1¾, 2, 2¼, 2½ inches. Links ⅝ x 2 inches inside.

Approximate Weight per Dozen Pairs—Pounds				
Approximate Length over all—Inches	*14	18	24	30
Number of Links in Chain	6	8	11	14
No. 0 (5/16-inch)	27	33	41	50
No. 1 (9/32-inch)	24	29	36	44
No. 2 (¼-inch)	21	24	30	35

*This size has heretofore been known as 12 inches

No. 86

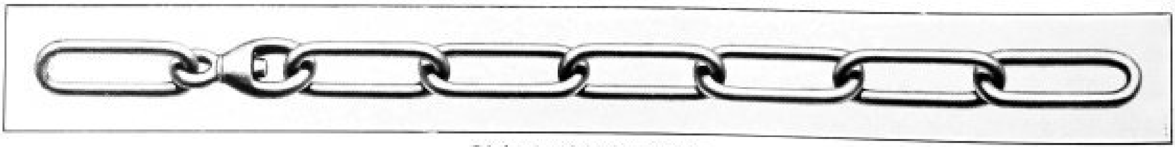


Furnished with Dees 1½, 1¾, 2, 2¼, 2½ inches. Links ⅝ x 2 inches inside.

Approximate Weight per Dozen Pairs—Pounds				
Approximate Length over all—Inches	*14	18	24	30
Number of Links in Chain	5	7	10	13
No. 0 (5/16-inch)	30	36	44	53
No. 1 (9/32-inch)	28	33	40	47
No. 2 (¼-inch)	25	29	34	39

*This size has heretofore been known as 12 inches

No. 88 (R. D. W.)



Links ¾ x 3 inches inside

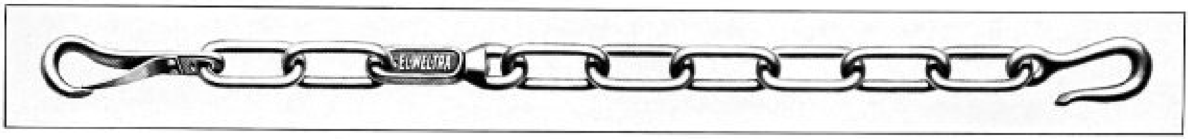
Approximate Weight per Dozen Pairs—Pounds							
Approximate Length over all—Inches	24	27	30	33	36	39	42
Total Number of Links	7	8	9	10	11	12	13
No. 0 (5/16-inch)	35	39	43	47	51	55	59

Packing : 1 dozen pairs in a bag.

Finish : Bright.

Elwel Heel Chains

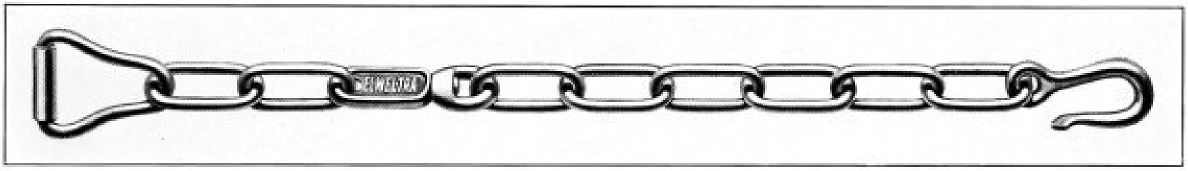
No. 90



Links ⅝ x 2 inches inside

Approximate Weight per Dozen Pairs—Pounds				
Approximate Length over all—Inches	18	24	30	36
Total Number of Links	5	8	11	14
No. 0 (5/16-inch)	33	41	49	58
No. 1 (9/32-inch)	31	37	43	50

No. 95



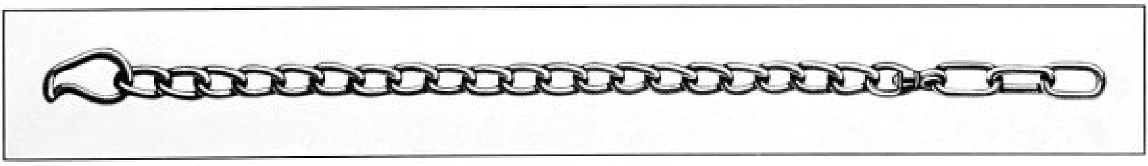
Furnished with Dees 1½, 1¾, 2, 2¼, 2½ inches.

Links ⅝ x 2 inches inside

Approximate Weight per Dozen Pairs—Pounds				
Approximate Length over all—Inches	18	24	30	36
Total Number of Links	5	8	11	14
No. 0 (5/16-inch)	30	39	47	56
No. 1 (9/32-inch)	28	35	41	48

No. 99

Lumber Heel Chain — Twist Link



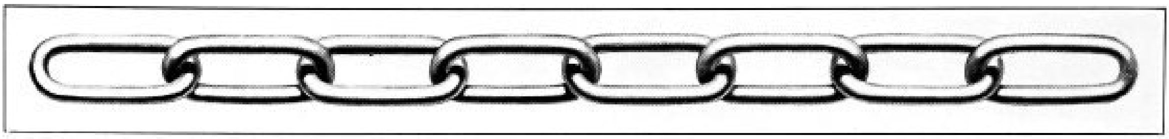
Approximate Weight per Dozen Pairs—Pounds	
No. 0 (5/16-inch). Approximate Length over all, 36 inches	83
No. 1 (9/32-inch). Approximate Length over all, 36 inches	63
No. 2 (¼-inch). Approximate Length over all, 36 inches	51

Packing : 1 dozen pairs in bag.

Finish : Bright.

Elwel Heel Chains

No. 130



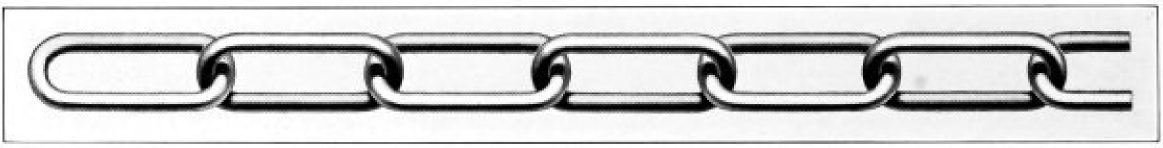
Links $\frac{5}{8}$ x 2 inches inside

Approximate Weight per 100 Feet—Pounds

No. 0 ($\frac{5}{16}$-inch)	74
No. 1 ($\frac{9}{32}$-inch)	60
No. 2 ($\frac{1}{4}$-inch)	45

Furnished only in lengths of 50 or 100 feet in bulk. *Finish:* Bright.

No. 131



Links $\frac{3}{4}$ x $2\frac{1}{2}$ inches inside

Approximate Weight per 100 Feet—Pounds

No. 0 ($\frac{5}{16}$-inch)	71
No. 1 ($\frac{9}{32}$-inch)	58
No. 2 ($\frac{1}{4}$-inch)	43

Furnished only in lengths of 50 or 100 feet in bulk. *Finish:* Bright.

American Chain Over-Shoes

Protected by American and Foreign Patents

The Principle of the Weed Tire Chains for Automobiles and Motor Trucks Humanely Adapted to Horses' Hoofs.

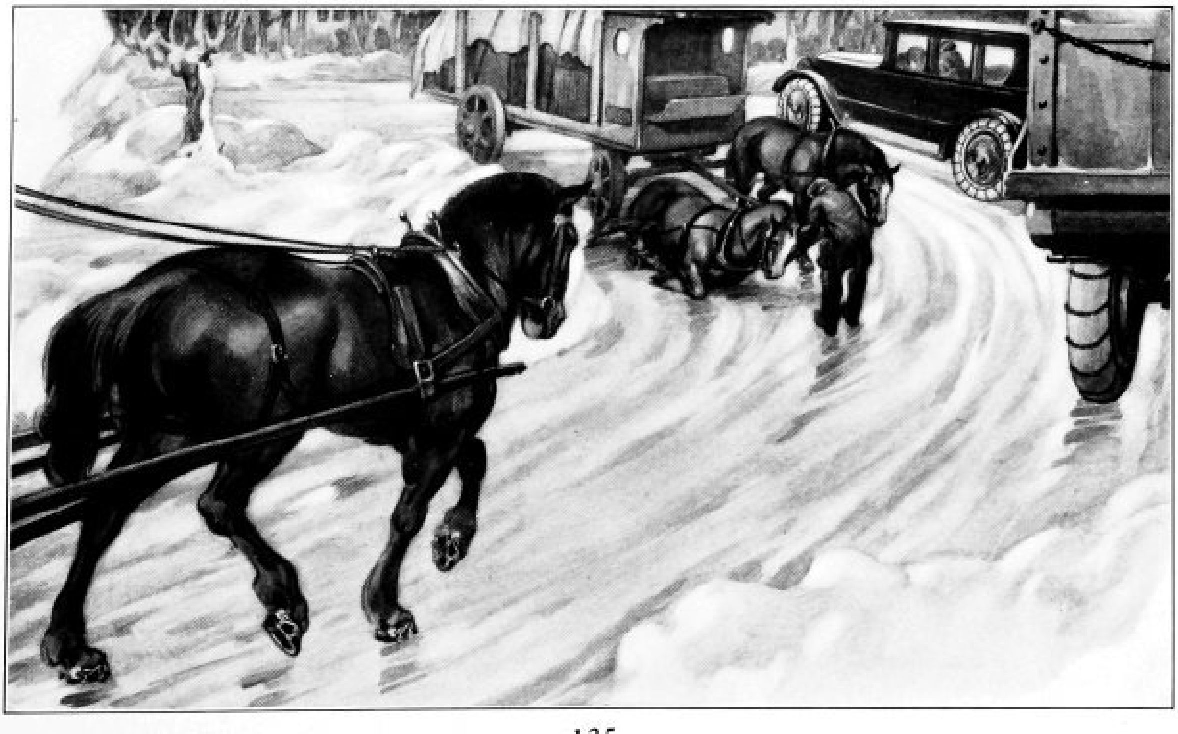
American Chain Over-Shoes make horses sure-footed on ice and snow covered roads and pavements. The chains are so constructed and arranged that they give the animal 48 points of contact—12 under each foot.

Awarded a prize of $500.00 by the American Society for the Prevention of Cruelty to Animals—the only one of its kind ever granted. Warmly endorsed by the Massachusetts S. P. C. A. and the New York Women's League for Animals.

American Chain Over-Shoes cannot injure the foot or leg in any way, as it is impossible for the chains or center link to touch the frog. They also prevent the "balling" of snow and ice in the shoe.

American Chain Over-Shoes enable a horse to step out fearlessly on the most slippery pavements and roads, and thus every ounce of his strength can be used for pulling power instead of being wasted in pitiful efforts to keep on his feet.

Special circular on application.



Harness Hardware

Rings

Steel

Gauge 4 (7/32-inch)

Inside Diameter—Inches	1¼	1⅜	1½	1¾
Approximate Weight per Gross—Pounds	7¼	7¾	8¾	9
Gross in Carton	½	½	½	½
Gross in Case	38	38	38	30
Gross in Barrel—Bulk	......	......	68	60

Gauge 3 (15/64-inch)

Inside Diameter—Inches	1¼	1⅜	1½	1⅝	1¾	2
Approximate Weight per Gross—Pounds	8½	9½	9¾	10½	11½	12½
Gross in Carton	½	½	½	½	½	½
Gross in Case	38	38	38	34	30	24
Gross in Barrel—Bulk	......	......	60	55	50	45

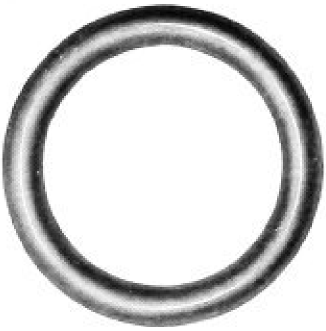
Gauge 2 (¼-inch)

Inside Diameter—Inches	1½	1¾	2	2¼	2½	2¾	3	3½	4	5
Approximate Weight per Gross—Pounds	11½	13	14	15	18	19	21	24	30	33
Gross in Carton	½	½	½	⅓	⅓	⅓	⅓	⅙	⅙	⅙
Gross in Case	30	30	24	16	16	10	10	......	......	......
Gross in Barrel—Bulk	50	48	40	37	32	25	17	......	......	......

Furnished in Bright (Polished), Japanned, XC Plate, Hot Galvanized, Electro Brass or Nickel Plate Finish.

Rings

Steel



Gauge 1 ($\frac{9}{32}$-inch)

Inside Diameter—Inches	1½	1¾	2	2¼	2½	2¾	3	3½	4	4½
Approximate Weight per Gross—Pounds	12½	16	18	20	23	25	27	32	34	40
Gross in Carton	½	½	½	⅓	⅓	⅓	⅓	⅙	⅙	⅛
Gross in Case	30	28	20	16	16	10	10	...	...	...
Gross in Barrel—Bulk	...	...	...	...	...	...	15	12	10	8

Gauge 0 ($\frac{5}{16}$-inch)

Inside Diameter—Inches	1½	1¾	2	2¼	2½	2¾	3	3½	4	4½	5
Approximate Weight per Gross—Pounds	18	21	23	26	28	30	33	38	44	50	58
Gross in Carton	½	½	½	⅓	⅓	⅓	⅓	⅙	⅙	⅙	⅙
Gross in Case	30	28	20	16	14	10	10	...	...	...	...

Gauge 00 ($\frac{3}{8}$-inch)

Inside Diameter—Inches	1½	1¾	2	2¼	2½	2¾	3	3½	4	4½	5
Approximate Weight per Gross—Pounds	28	31	33	38	41	45	48	55	59	67	76
Gross in Carton	½	½	½	⅓	⅓	⅙	⅙	⅙	⅙	⅛	⅛

Furnished in Bright (Polished), Japanned, XC Plate, Hot Galvanized,
Electro Brass or Nickel Plate Finish

Harness Rings

No. 7

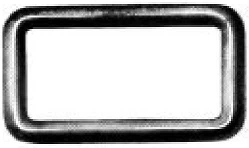
Steel

Actual Gauge (W. & M.)	11	10	9	8	7	7	7
Inside Diameter—Inches	1/2	5/8	3/4	7/8	1	1 1/8	1 1/4
Approximate Weight per Gross—Pounds	1	1 1/4	2 1/4	2 3/4	3 3/4	4 1/4	4 1/2
Gross in Carton	2	2	2	1	1	1	1
Gross in Case	90	80	70	60	55	50	45
Gross in Barrel—Bulk	. .	. .	200	170	125	115	110

Furnished in Bright (Polished), Japanned, XC Plate, Hot Galvanized, Electro Brass or Nickel Plate Finish

Tug Loops

No. 157



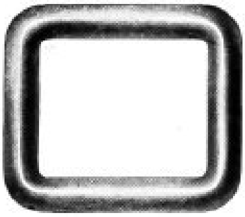
Steel

Actual Gauge (W. & M.)	8	7	6	4
Inside Length—Inches	1	1 1/8	1 1/4	1 1/2
Inside Width—Inches	1/2	9/16	5/8	11/16
Approximate Weight per Gross—Pounds	2 3/4	3 1/2	4 1/4	7
Gross in Carton	1	1	1	1
Gross in Case	. .	. .	60	60

Furnished in Japanned Finish only

Bridle Squares

No. 354



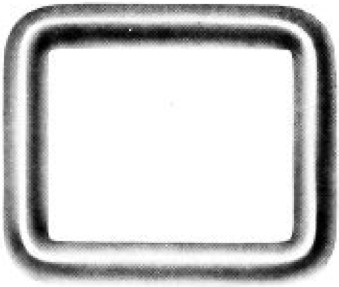
Gauge of Material, No. 7—Steel

Size—Inches	¾ x ⅞	⅞ x 1	1 x 1⅛
Approximate Weight per Gross—Pounds	4	4½	4¾
Gross in Carton	1	1	1
Gross in Case	......	76	......
Gross in Barrel—Bulk	......	200	......

Furnished in Japanned Finish only

Halter Squares

No. 356



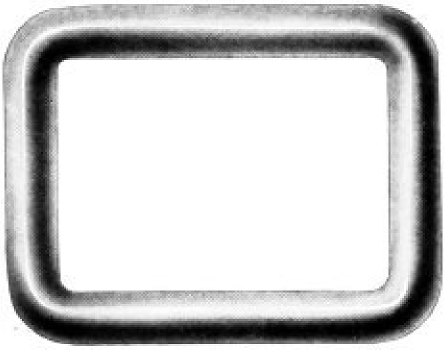
Steel

Gauge of Material	5	4	2	1
Size—Inches	⅞ x 1⅛	1 x 1¼	1¼ x 1½	1½ x 1¾
Approximate Weight per Gross—Pounds	6¼	8	11½	14
Gross in Carton	½	½	½	½
Gross in Case	80	53	42	30
Gross in Barrel—Bulk	90	70	50	40

Furnished in Japanned, XC Plate or Brass Electro Plate Finish

Heavy Trace Squares

No. 344



⅜-inch Material—Steel

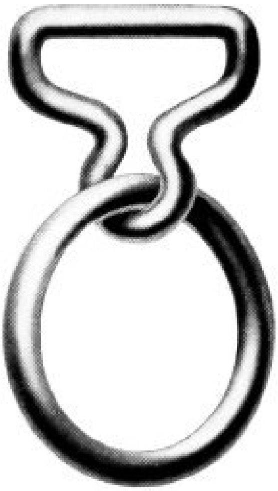
Size—Inches	1¼ x 2	1½ x 2¼	1¾ x 2½	2 x 2⅝	2¼ x 2¾	2½ x 3
Approximate Weight per Dozen—Pounds	3	3½	4	4¼	4½	5

Packing: 2 Dozen in a Carton

Furnished in Japanned Finish only

Halter Loops and Rings

No. 84



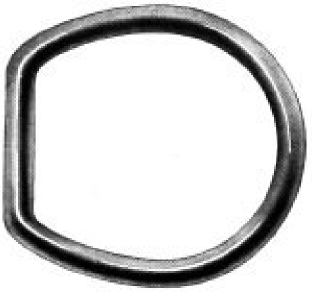
Size—Inches	⅞ Loop 1¼ Ring	1 Loop 1½ Ring	1¼ Loop 1¾ Ring	1½ Loop 1¾ Ring
Gauge of Material in Rings	No. 4	No. 3	No. 2	No. 2
Approximate Weight per Gross—Pounds	14	16	21	25
Gross in Carton	¼	¼	¼	¼
Gross in Case	15	15	11	11
Gross in Barrel—Bulk	35	30	25	25

Furnished in Japanned, XC Plate or Brass Electro Plate Finish

Dees

No. 111

For Automobile Straps

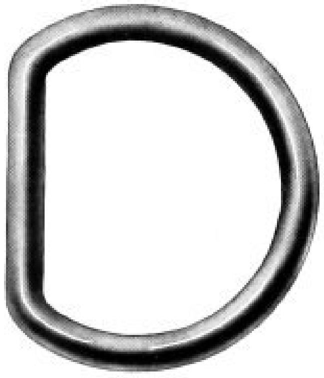


Steel

Gauge of Material	5
Size—Inches	1⅛
Approximate Weight per Gross—Pounds	7¾
Gross in Barrel—Bulk	65

Furnished in Japanned Finish only

No. 325



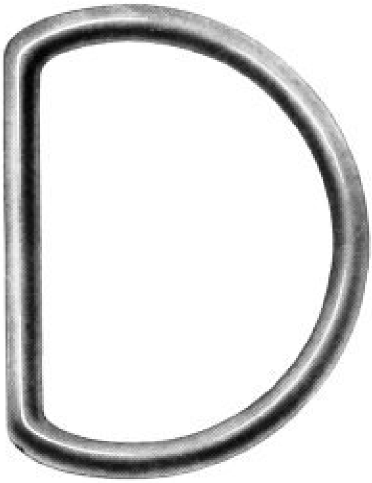
Steel

Gauge of Material	6	5	4	3	2	1
Size—Inches	⅞	1	1⅛	1¼	1½	1¾
Approximate Weight per Gross—Pounds	4½	6¾	7½	9	13	17
Gross in Carton	1	1	1	½	½	½
Gross in Case	...	...	...	45	38	30

Furnished in Japanned, XC Plate or Brass Electro Plate Finish

Dees

No. 350



Steel

Gauge 2 (¼-inch)

Size—Inches	2	2¼	2½	2¾	3
Approximate Weight per Gross—Pounds	15	16	18	19	21
Gross in Carton	½	⅓	⅓	⅓	⅓

Gauge 1 (9/32-inch)

Size—Inches	2½	2¾	3	3½	4
Approximate Weight per Gross—Pounds	23	26	28	31	35
Gross in Carton	⅓	⅓	⅓	⅓	⅙

Gauge 0 (5/16-inch)

Size—Inches	3	3½	4	4½	5	5½
Approximate Weight per Gross—Pounds	33	38	44	50	58	66
Gross in Carton	⅓	⅓	⅙	1/12	1/12	1/12

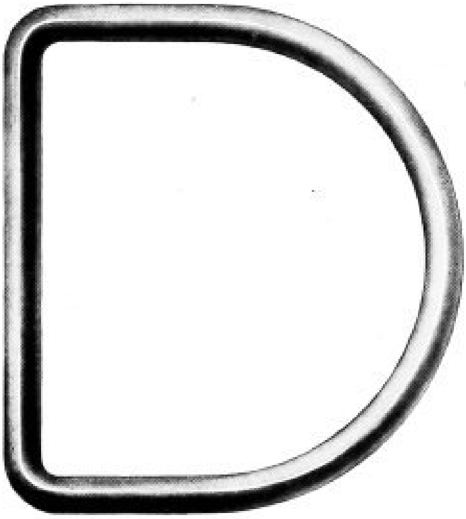
Gauge 00 (⅜-inch)

Size—Inches	4	4½	5	5½
Approximate Weight per Gross—Pounds	59	67	81	90
Gross in Carton	⅙	⅙	1/12	1/12

Furnished in Japanned, XC Plate or Brass Electro Plate Finish

Dees

No. 375



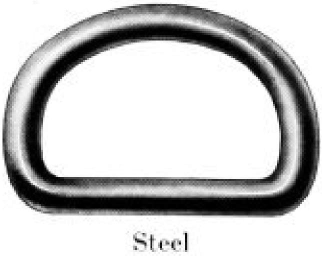
Steel

Gauge of Material	2 (¼-inch)		1 (9/32-inch)			0 (5/16-inch)		
Size—Inches	2½	2¾	3	3½	4	3	3½	4
Approximate Weight per Gross—Pounds	19	21	32	34	40	38	44	50
Gross in Carton	⅓	⅓	⅓	⅙	⅙	⅓	⅙	⅙

Furnished in Japanned, XC Plate or Brass Electro Plate Finish.

No. 385

For Web Halters



Steel

Gauge No. 7

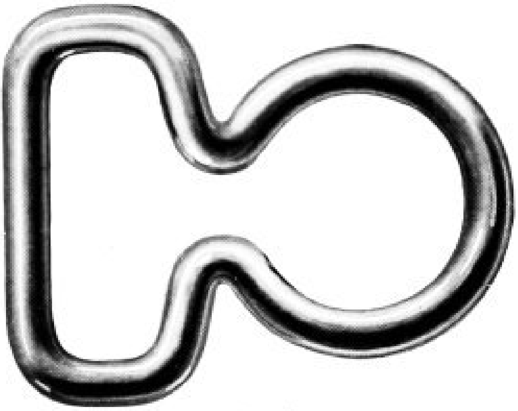
In Bulk

Size—Inches	1¼	1½
Approximate Weight per Gross—Pounds	3½	4¼

Furnished in Bright (Polished) Finish only.

Pole Strap Dees

No. 386



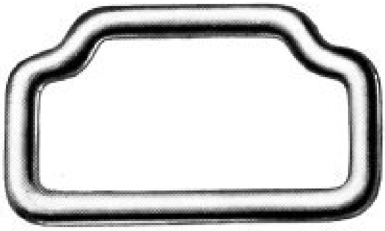
Steel

Gauge of Material	2 (¼-in.)	1 (9/32-inch)		
Size—Inches	1¼	1½	1¾	2
Approximate Weight per Gross—Pounds	11	16	18	21
Gross in Carton	⅓	⅓	⅓	¼
Gross in Case	...	20	20	...

Furnished in Japanned Finish only

Collar Strap Slides

No. 388



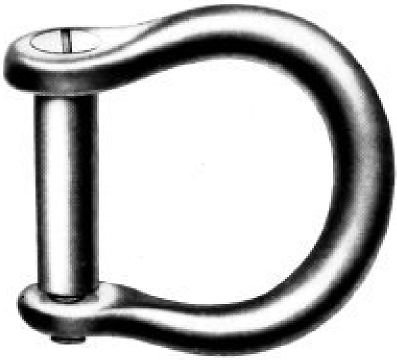
Gauge of Material, No. 7—Steel

Size—Inches	1¼	1½	1¾	2
Approximate Weight per Gross—Pounds	4	4¼	5½	6¼
Gross in Carton	1	1	1	1
Gross in Case	60	60	60	60

Furnished in Japanned Finish only

Screw Dees

No. 390—With Roller



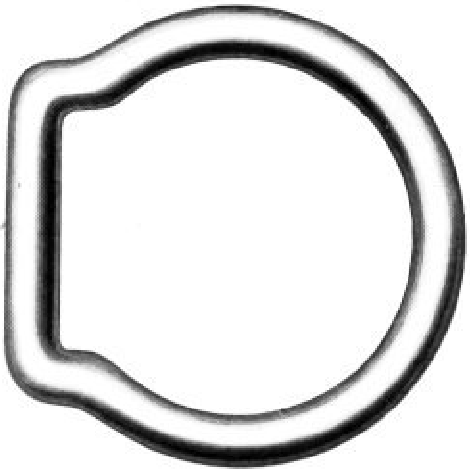
Malleable

Size—Inches	1¼	1½	1¾	2
Approximate Weight per Dozen—Pounds	1½	2	2½	2¾
Dozen in Carton	2	2	2	2

Furnished in Japanned Finish only—Nickeled Screw

Dees

No. 153



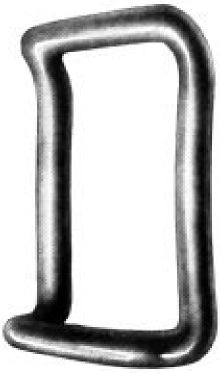
Size of Material, $\frac{9}{32}$-inch—Steel

Size—Inches	1¼	1½	1¾	2
Approximate Weight per Gross—Pounds	15	18	21	24
Gross in Carton	¼	¼	¼	¼

Furnished in Japanned Finish only

Layer Loops

No. 391



Gauge of Material, No. 6—Steel

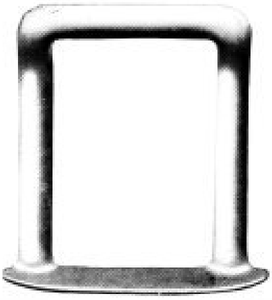
Size Loop—Inches	5/8	3/4	7/8	7/8	1	1	1
Size Layer—Inches	1	1 1/8	1 1/8	1 1/4	1 1/8	1 1/4	1 1/2
Approximate Weight per Gross—Pounds	5 1/4	5 3/4	5 3/4	6	6	6 3/4	7 1/4
Gross in Carton	1	1	1/2	1/2	1/2	1/2	1/2
Gross in Case	....	....	....	30	30	30	30

Size Loop—Inches	1 1/8	1 1/8	1 1/8	1 1/4	1 1/4	1 1/4	1 1/2	1 1/2
Size Layer—Inches	1 1/8	1 1/4	1 1/2	1 1/4	1 1/2	1 3/4	1 1/4	1 1/2
Approximate Weight per Gross—Pounds	7 1/4	7 1/4	7 1/4	7 1/2	7 3/4	7 3/4	8	8
Gross in Carton	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2
Gross in Case	30	30	25	25	25	25	25	25

Furnished in Japanned Finish only

Layer Loops

No. 392

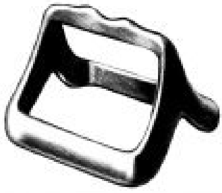


Malleable

Size Loop — Inches Size Layer — Inches	1 1⅛	1 1¼	1 1½	1⅛ 1¼	1⅛ 1½	1¼ 1¼	1¼ 1½	1¼ 1¾	1½ 1½
Gross in Carton . .	½	½	½	½	½	½	½	½	½
Gross in Case . . .	30	30	30	30	25	25	25	25	25

Twin Harness Loops

No. 247



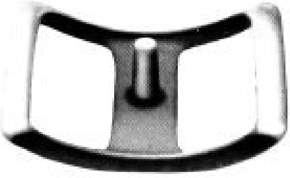
Malleable

Size — Inches	⅝	¾	⅞	1	1⅛	1¼
Gross in Carton	1	½	½	½	½	½
Gross in Case	30	25	25	25	20	20

Furnished in Japanned Finish only

Conway Loop Buckles

No. 210



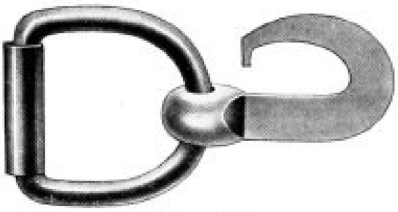
Malleable

Size—Inches	⅝	¾	⅞	1	1⅛	1¼	1½
Gross in Carton	½	½	½	½	½	¼	¼
Gross in Case	30	25	25	25	25	20	18

Furnished in Japanned Finish only

Pinery Hooks and Dees

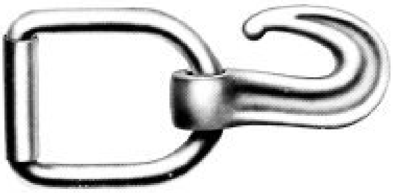
Wrought Dee and Hook



No. 489

Size of Material in Dees, ⅜ inch

Wrought Dee, Malleable Hook

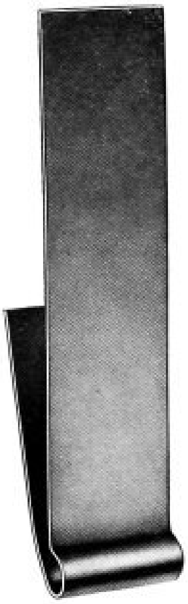


No. 490—Long Pattern

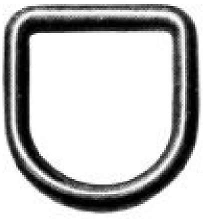
Size of Dee—Inches	1½	1¾	2	2¼	2½	2¾	3
Approximate Weight per Dozen—Pounds	6	6¼	6¾	7¼	7½	8	8½
Dozen in Carton	1	1	1	1	1	1	1
Dozen in Case	75	75	60	60	48	48	48

Furnished in Bright (Polished) Finish only

Bearer Dees and Clips for Gig Saddles



No. 393
Clip



No. 394 Dee
Steel

No. 395
Clip and Dee

No. 395 Bearer Dees and Clips

Size of Dee and Width of Clip	⅞	1
Approximate Weight per Gross—Pounds	12¾	14

No. 394 Bearer Dees (No. 6 Gauge)

Size of Dee	⅞	1
Approximate Weight per Gross—Pounds	4¾	5

No. 393 Bearer Clips

Size of Clips—Width	⅞	1
Approximate Weight per Gross—Pounds	8	9

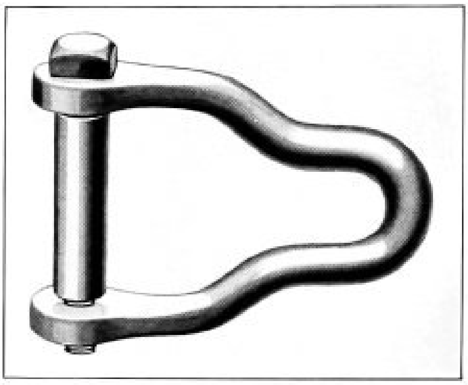
Clips will be furnished with holes punched to order

Packed in Bulk

Furnished in Japanned Finish only

Trace Dees—Bolt and Roller

No. 488



Malleable

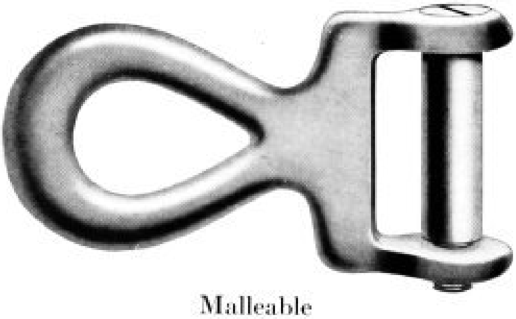
Size—Inches	1½	1¾	2	2¼	2½
Approximate Weight per Dozen—Pounds	3¾	4	4¼	5¼	6
Dozen in Carton	1	1	1	1	1
Dozen in Case	90	90	80	60	60

Furnished in Bright (Polished) or Japanned Finish

Repair Screw Cockeyes

No. 466

For Clip Cockeyes



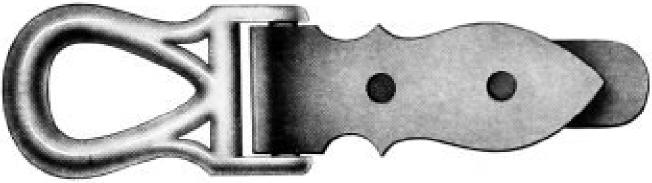
Malleable

Size, to Match Clip for Trace—Inches	1½
Approximate Weight per Dozen—Pounds	1½
Dozen in Carton	2
Actual Inside Width—Inches	1⅛

Furnished in Japanned Finish (Nickeled Screws)

Clip Cockeyes—No. 165

Little Giant Pattern



Size, Width of Trace—Inches	1½	1¾
Approximate Wt. per Doz.—Lbs.	3½	4¾
Dozen in Carton	1	1
Dozen in Case	76	76
Actual Width of Clip—Inches	1⅛	1¼

Clips only—No. 167

Approximate Weight per Dozen	2¼ Pounds

Packing: 2 Dozen in a Carton.
152 Dozen in a Case.

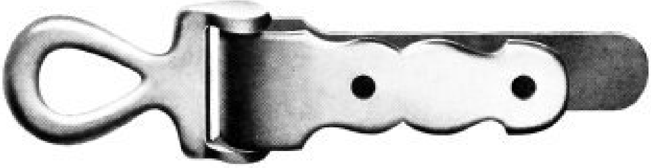
Cockeyes only—No. 169

Approximate Weight per Dozen	2 Pounds

Packing: 2 Dozen in a Carton.

Clip Cockeyes—No. 440

Size, Width of Trace—Inches	1½	1¾
Approximate Wt. per Doz.—Lbs.	3½	4¾
Dozen in Carton	1	1
Dozen in Case	76	76
Actual Width of Clips—Inches	1⅛	1¼



Clips only—No. 447

Approximate Weight per Dozen	2¼ Pounds

Packing: 2 Dozen in a Carton.
152 Dozen in a Case.

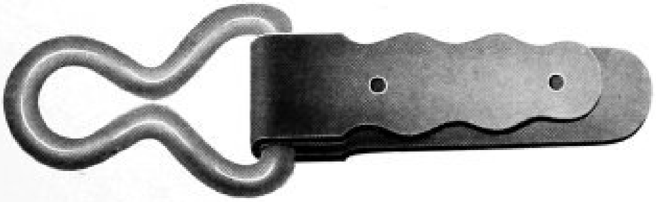
Cockeyes only—No. 449

Approximate Weight per Dozen	2 Pounds

Packing: 2 Dozen in a Carton.

Clip Cockeyes—No. 540

Made with Wrought Clips and Steel Cockeyes



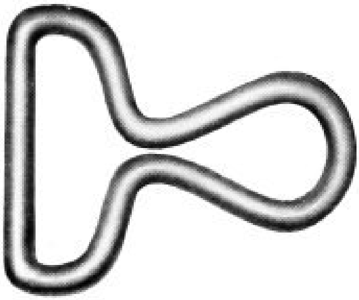
Size, Width of Trace—Inches	1½	1¾
Approximate Wt. per Doz.—Lbs.	3½	4½
Dozen in Carton	1	1
Dozen in Case	76	76
Actual Width of Clips—Inches	1⅛	1¼

Furnished in Japanned Finish only

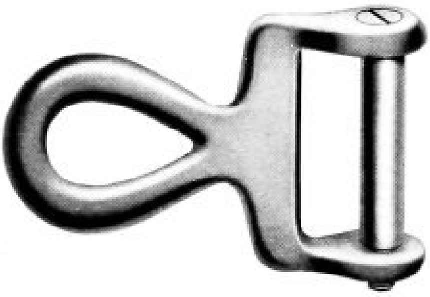
Triangular Cockeyes

No. 455—With Rollers
No. 445—Without Rollers

Steel



Size, Inside Width—Inches	1¼	1⅜	1½	1¾	2	2¼	2½
Approximate Weight per Dozen—Pounds	1¾	2	2	2¼	2¾	3¼	3¾
Dozen in Carton	2	2	2	2	2	2	2
Dozen in Case	142	142	142	142	142	142	142



Screw Cockeyes

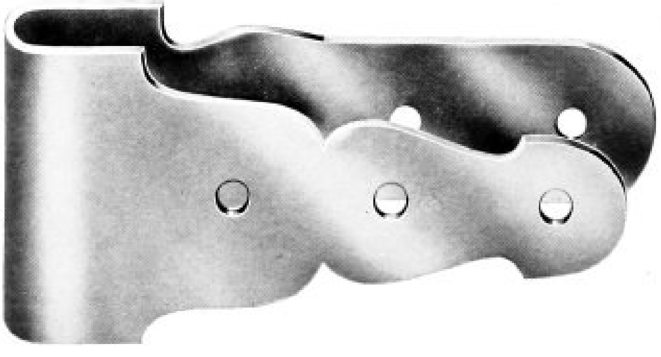
No. 465—With Rollers

(Malleable, with Nickeled Screws)

Size, Inside Width—Inches	1¼	1⅜	1½	1¾	2	2¼	2½	2¾	3	3½
Approximate Weight per Dozen—Pounds	2¼	2½	2¾	3	3½	3¾	4¼	4¾	5¾	6
Dozen in Carton	2	2	2	2	2	2	2	1	1	1
Dozen in Case	160	160	160	120	120	120	90	90	90	90

Concord Hame Clips

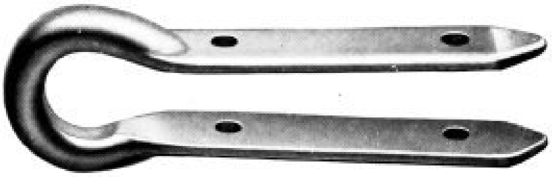
No. 989



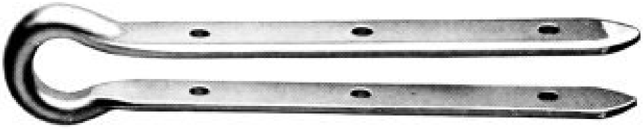
Size, Width—Inches	1½	1¾	2	2¼	2½
Approximate Weight per Dozen—Pounds	3¼	4¼	4½	4¾	5
Dozen in Carton	1	1	1	1	1
Dozen in Case	90	90	90	90	90

Furnished in Japanned Finish only

Hame Clips



No. 982—$\frac{3}{8}$-Inch—2-Hole

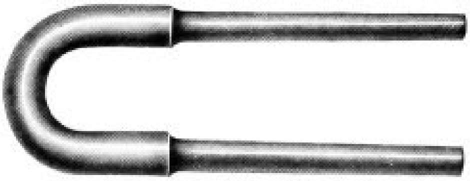


No. 984—$\frac{3}{8}$-Inch—3-Hole
No. 985—$\frac{7}{16}$-Inch—3-Hole

Above Clips have beveled ends. Easy to apply to Trace

	2-Hole No. 982	3-Hole No. 984	3-Hole No. 985
Size—Inches	$\frac{3}{8}$	$\frac{3}{8}$	$\frac{7}{16}$
Approximate Weight per Dozen—Pounds	$2\frac{1}{2}$	4	$5\frac{1}{4}$
Dozen in Carton	2	2	2
Dozen in Case	200	120	120
Dozen in Barrel—Bulk	200	....	....

Hame Staples



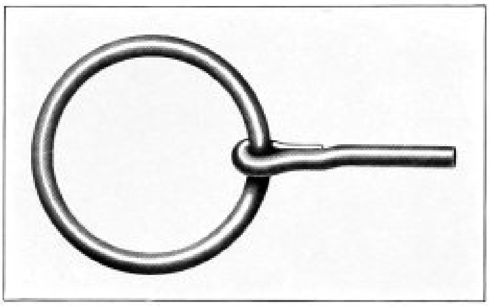
No. 960

	Regular No. 960	Extra Wide No. 958
Size—Inches	$\frac{3}{8}$	$\frac{3}{8}$
Approximate Weight per Dozen—Pounds	$1\frac{5}{8}$	$1\frac{5}{8}$
Dozen in Carton	2	2
Dozen in Case	290	290

Hame Line Rings

No. 97

Improved Concord



Steel

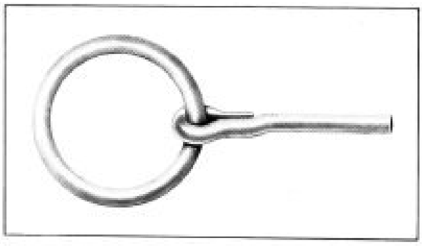
Sliding Ring, preventing the leather line from wearing through the ring at one point.
Furnished with Burrs

Gauge of Material in Ring	No. 2 (¼-inch)
Inside Diameter of Ring—Inches	2
Approximate Weight per Dozen—Pounds	1¾
Dozen in Carton	1
Dozen in Case	100

Furnished in Bright (Polished) Finish only

Back Strap Rings

No. 93



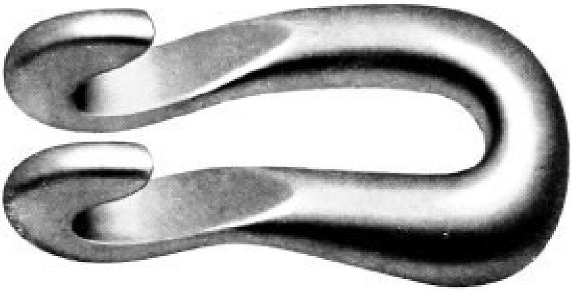
Steel—Furnished with Burrs

Gauge of Material in Ring	No. 3 (15/64-inch)
Inside Diameter of Ring—Inches	1⅝
Approximate Weight per Dozen—Pounds	1⅛
Dozen in Carton	2
Dozen in Case	200

Furnished in Bright (Polished) Finish only

Adjustable Draft Hame Hooks

No. 83



Malleable
Approximate Weight, 3 Pounds per Dozen
Packed 2 Dozen in a Carton
Furnished in Bright (Polished) Finish only

Gee Haw Rings

No. 234

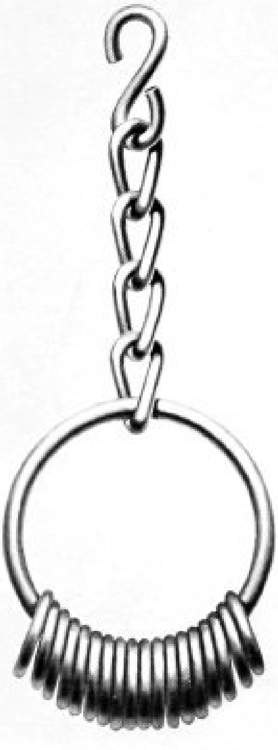
Used for attracting the attention of the "lead" horse in a four or six horse team driven with "jerk" line.

S Hook is attached to rump ring on "lead" horse.

Approximate Weight per Dozen	$6\frac{3}{4}$ Pounds
Large Ring, $2\frac{3}{4}$ inches inside diameter,	No. 2 ($\frac{1}{4}$-inch)
Small Rings, $\frac{3}{4}$ inch inside diameter,	No. 9 ($\frac{9}{64}$-inch)
Gauge of Twist Links	No. 6 ($\frac{3}{16}$-inch)

Packed $\frac{1}{2}$ Dozen in a Carton, 46 Dozen in a Case

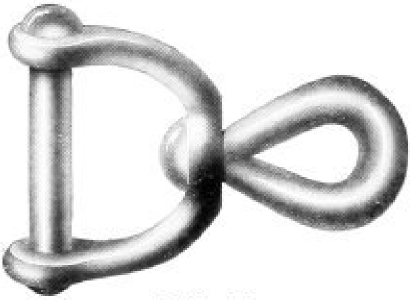
Furnished in XC Plate Finish only



Steel

Cockeye Toggles

No. 481



Malleable

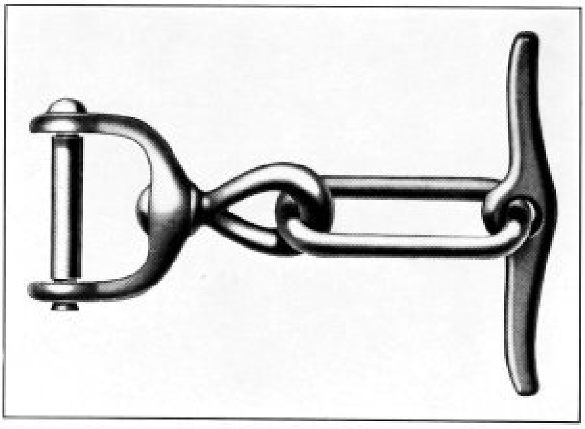
Approximate Weight per Dozen—Pounds

Size, Width of Dee—Inches	1½	1¾	2	2¼	2½	2¾	3
No. 481. Rivet and Roller **No. 482.** Screw and Roller	4¼	4½	5¾	6¼	6¾	7	7¼
Dozen in Carton	1	1	1	1	1	1	1

Furnished in Japanned Finish only

Concord Toggles

No. 485



Connecting Link ¾ x 3 inches inside, made from 5/16-inch material

Approximate Weight per Dozen—Pounds

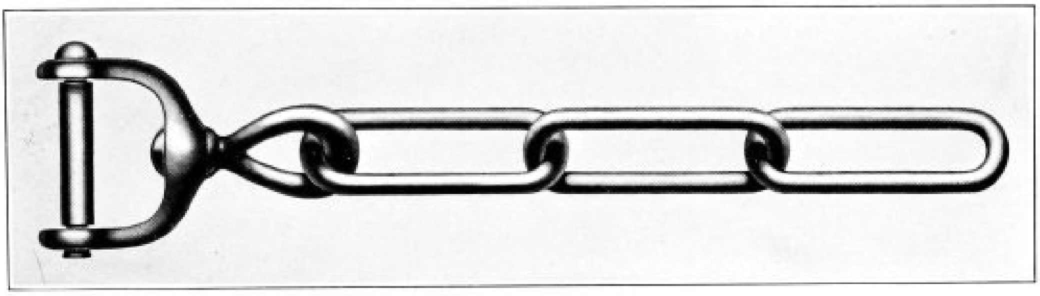
Size, Width of Dee—Inches	1½	1¾	2	2¼	2½	2¾	3
No. 485. Rivet and Roller **No. 486.** Screw and Roller	9	9¼	10¾	11	11¼	11¾	12
Dozen in Carton	⅓	⅓	⅓	⅓	⅓	⅓	⅓

Furnished in Japanned Finish only

Concord Toggles

No. 487

With Three Links



Links ¾ x 3 inches inside—5⁄16-inch material

	Approximate Weight per Dozen—Pounds								
Size, Width of Dee—Inches	1½	1¾	2	2¼	2½	2¾	3	3½	4
No. 487. Rivet and Roller	11	11	12	12	13	13	14	14	15
No. 587. Screw and Roller	11	11	12	12	13	13	14	14	15

Packing: ⅓ dozen in a carton.

Furnished in Japanned Finish only.

Add to above weights for extra Links:

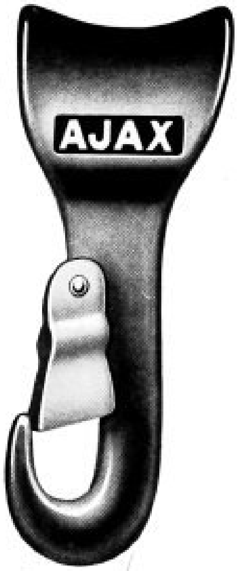
1 extra Link, 2 pounds per dozen
2 extra Links, 4 pounds per dozen
3 extra Links, 6 pounds per dozen

Orders for these Toggles should indicate number of Links required

Ajax Breast Chain Snaps

("Ajax" Registered U. S. Patent Office.)

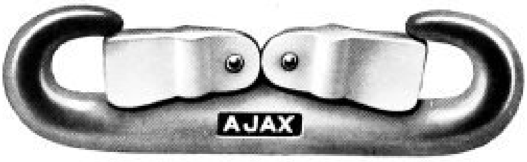
No. 545—Center (slide)



Length—Inches	5¼
Approximate Weight per Dozen—Pounds	7¼
Dozen in Carton	1
Dozen in Case	48

Furnished in Polished, Imitation Rubber
or XC Plate Finish

No. 583—End

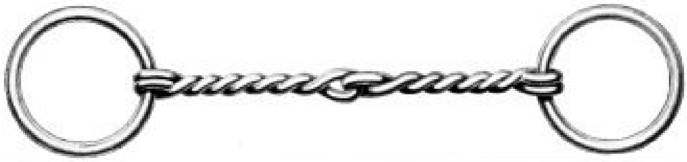


Length over all—Inches	5¼
Approximate Weight per Dozen—Pounds	4¼
Dozen in Carton	3
Dozen in Case	144

Furnished in Polished, Imitation Rubber or XC Plate Finish

Wire Ring Bits

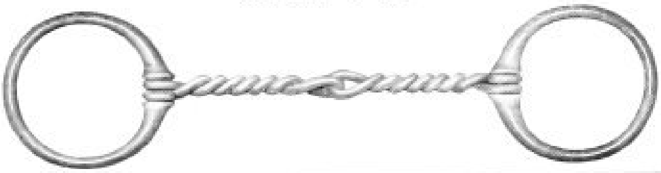
No. 845



Gauge of Material in Rings	No. 2 (¼-inch)
Inside Diameter of Rings—Inches	2
Approximate Weight per Dozen—Pounds	4½
Dozen in Carton	1
Dozen in Case	40

XC Plate Finish

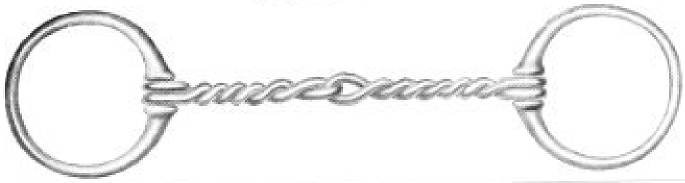
No. 846



Gauge of Material in Rings	No. 2 (¼-inch)
Inside Diameter of Rings—Inches	2¼
Approximate Weight per Dozen—Pounds	4¾
Dozen in Carton	1
Dozen in Case	40

XC Plate Finish

No. 847



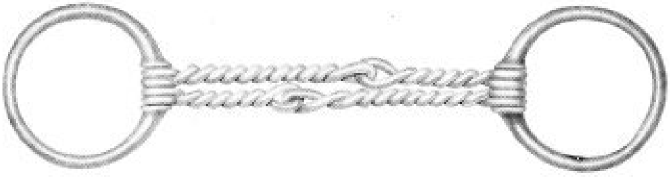
Gauge of Material in Rings	No. 2 (¼-inch)
Inside Diameter of Rings—Inches	2½
Approximate Weight per Dozen—Pounds	5½
Dozen in Carton	1
Dozen in Case	40

XC Plate Finish

The above Bits are made with Mouth Pieces 6 inches long, No. 7 Gauge material

Wire Ring Bits

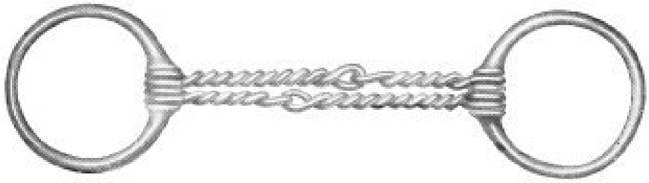
No. 855



Gauge of Material in Rings	No. 2 (¼-inch)
Inside Diameter of Rings—Inches	2½
Approximate Weight per Dozen—Pounds	6½
Dozen in Carton	1
Dozen in Case	32

XC Plate Finish

No. 856



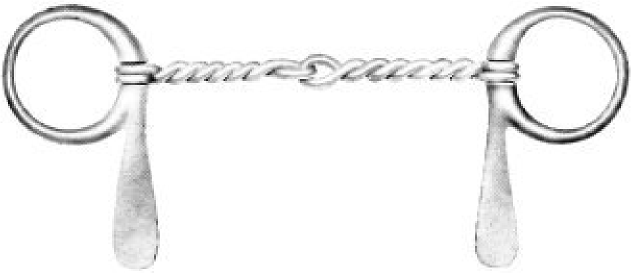
Gauge of Material in Rings	No. 2 (¼-inch)
Inside Diameter of Rings—Inches	2¾
Approximate Weight per Dozen—Pounds	7
Dozen in Carton	1
Dozen in Case	32

XC Plate Finish

The above Bits are made with Mouth Pieces 6 inches long,
No. 9 gauge material

Wire Snaffle Bits

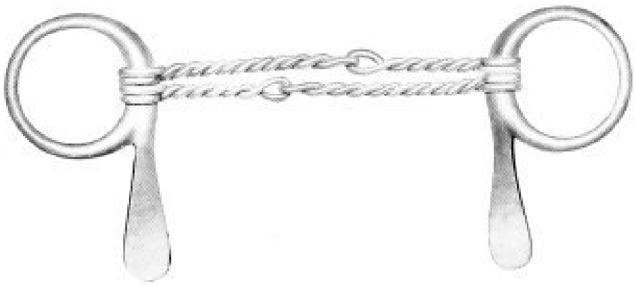
No. 865



Inside Diameter of Rings—Inches	2
Approximate Weight per Dozen—Pounds	5¼
Dozen in Carton	½

XC Plate Finish

No. 866



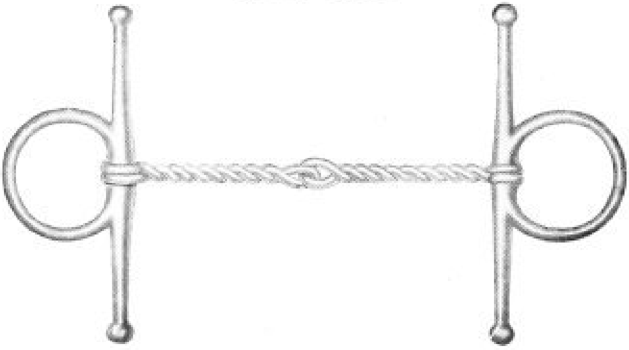
Inside Diameter of Rings—Inches	2
Approximate Weight per Dozen—Pounds	6⅛
Dozen in Carton	½

XC Plate Finish

The above Bits are made with Mouth Pieces 6 inches long.
Gauge of Material: Single Bits, No. 7; Double Bits, No. 9

Wire Snaffle Bits

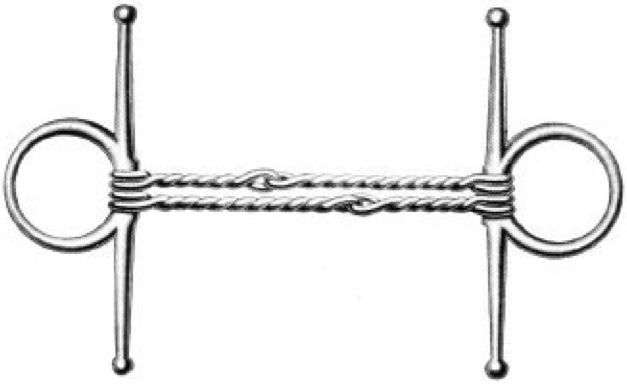
No. 871



Inside Diameter of Rings—Inches	1¾
Approximate Weight per Dozen—Pounds	4¾
Dozen in Carton	½
Dozen in Case	32

XC Plate Finish

No. 876



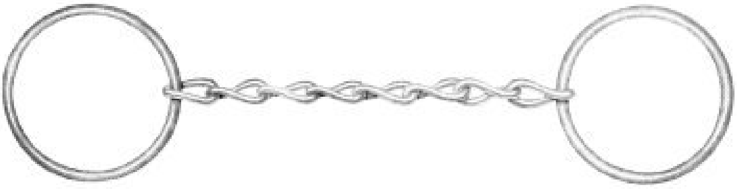
Inside Diameter of Rings—Inches	1¾
Approximate Weight per Dozen—Pounds	6
Dozen in Carton	½
Dozen in Case	32

XC Plate Finish

The above Bits are made with Mouth Pieces 6 inches long
Gauge of Material : Single Bits, No. 7; Double Bits, No. 9

Chain Mouth Bits

No. 78



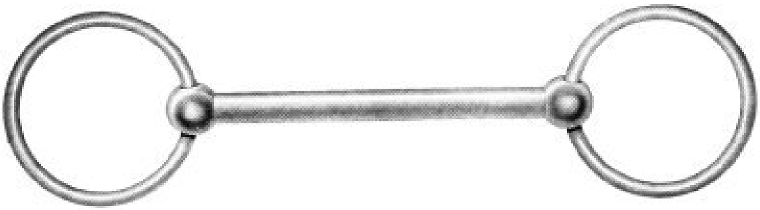
Length of Mouth Piece, 6½ Inches—No. 7 Gauge Material

Gauge of Material in Rings	No. 2 (¼-inch)
Inside Diameter of Rings—Inches	2¾
Approximate Weight per Dozen—Pounds	5¾
Dozen in Carton	1

XC Plate Finish

Ring Bits

No. 90



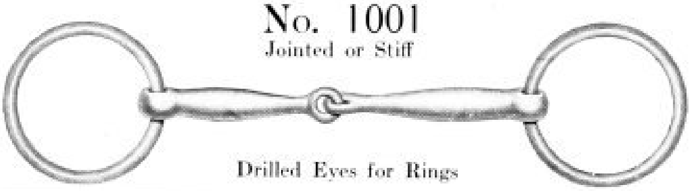
	No. 90	No. 91
Gauge of Material in Rings	No. 1 (9/32-in.)	No. 1 (9/32-in.)
Inside Diameter of Rings—Inches	3	3
Length of Mouth Piece—Inches	5	6
Approximate Weight per Dozen—Pounds	11½	13
Dozen in Carton	½	½
Dozen in Case	21	. . . .

Furnished in XC Plate Finish only

Malleable Ring Bits

No. 1001

Jointed or Stiff



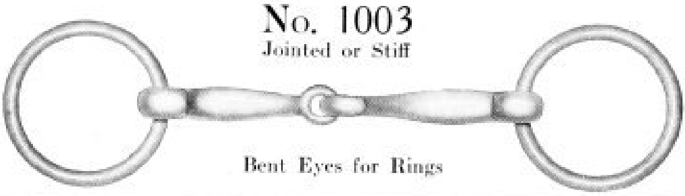
Drilled Eyes for Rings

Gauge of Material in Rings	No. 3 ($\frac{15}{64}$-inch)
Inside Diameter of Rings—Inches	2
Approximate Weight per Dozen—Pounds	4½
Dozen in Carton	1
Dozen in Case	60
Dozen in Barrel—Bulk	85

Japanned or XC Plate Finish

No. 1003

Jointed or Stiff



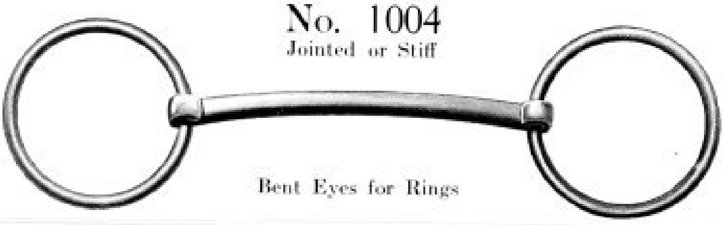
Bent Eyes for Rings

Gauge of Material in Rings	No. 3 ($\frac{15}{64}$-inch)
Inside Diameter of Rings—Inches	2
Approximate Weight per Dozen—Pounds	3½
Dozen in Carton	1
Dozen in Case	60
Dozen in Barrel—Bulk	85

Japanned or XC Plate Finish

No. 1004

Jointed or Stiff



Bent Eyes for Rings

Gauge of Material in Rings	No. 3 ($\frac{15}{64}$-inch)
Inside Diameter of Rings—Inches	2½
Approximate Weight per Dozen—Pounds	4
Dozen in Carton	1
Dozen in Case	60
Dozen in Barrel—Bulk	75

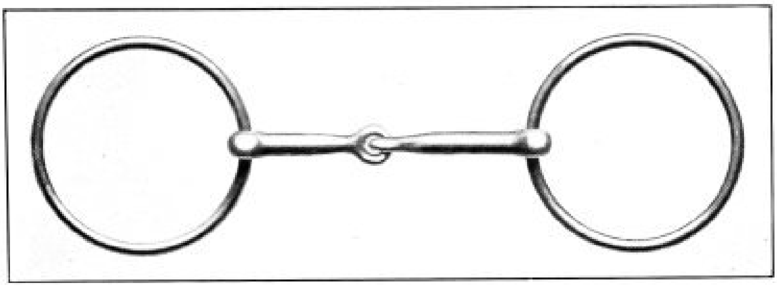
Japanned or XC Plate Finish

The above Bits are made with Mouth Pieces 5 inches long

Race Bits

No. 26

Malleable—Jointed



Drilled Eyes for Rings

Gauge of Material in Rings	No. 2 (¼-inch)
Inside Diameter of Rings—Inches	3½
Approximate Weight per Dozen—Pounds	7
Dozen in Carton	½
Dozen in Case	40

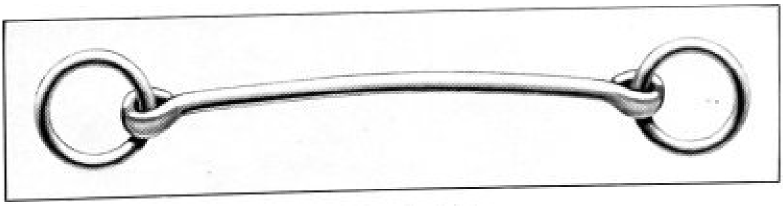
XC or Nickel Plate Finish

The above Bits are made with Mouth Pieces 5 inches long

Overcheck Bits

No. 11

Steel—Stiff



Bent Eyes for Rings

Gauge of Material in Rings	No. 8 (5/32-inch)
Inside Diameter of Rings—Inch	⅞
Approximate Weight per Dozen—Pounds	1½
Dozen in Carton	2

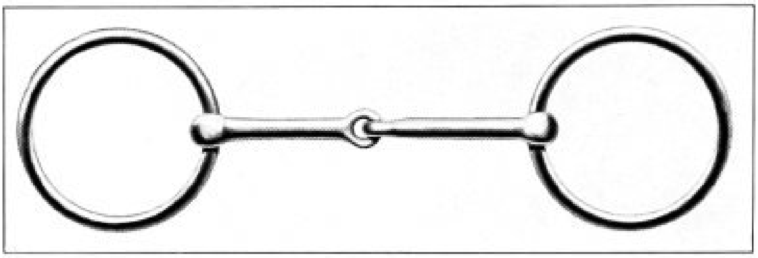
Nickel Plate Finish

The above Bits are made with Mouth Pieces 5 inches long, No. 4 (7/32-inch) material

Ring Bits

No. 471

Wrought—Jointed



Mouth Piece 6 inches long, 7/16-inch material

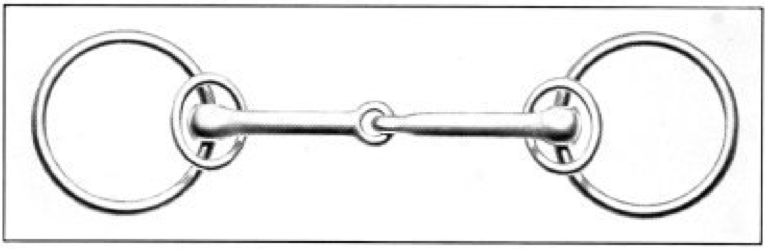
Gauge of Material in Rings	No. 1 (9/32-inch)
Inside Diameter of Rings—Inches	3¼
Approximate Weight per Dozen—Pounds	9
Dozen in Carton	½

XC or Nickel Plate Finish

Wilson Ring Bits

No. 473

Wrought—Jointed



Mouth Piece 6 inches long, 7/16-inch material

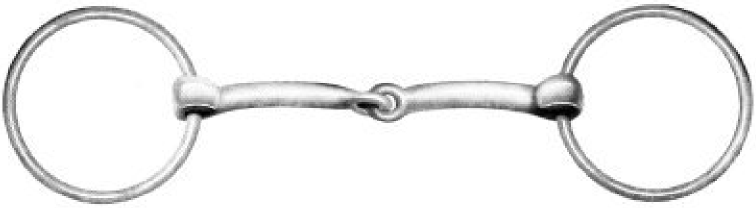
Gauge of Material—End Rings Gauge of Material—Sliding Rings	No. 2 (¼-inch) No. 3 (15/64-inch)
Inside Diameter of End Rings—Inches Inside Diameter of Sliding Rings—Inches	2¾ 1¼
Approximate Weight per Dozen—Pounds	7¾
Dozen in Carton	½

XC Plate Finish

Ring Bits

No. 47 A—Wrought

Jointed Mouth



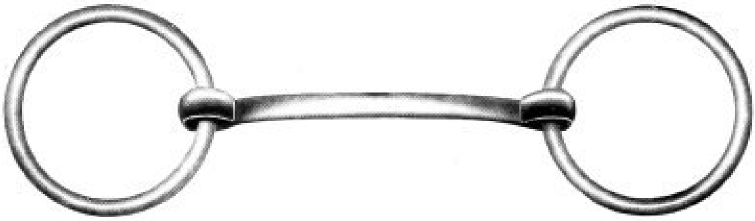
Mouth Piece 5¾ inches long, 7/16-inch material

Gauge of Material in Rings	No. 2 (¼-inch)
Inside Diameter of Rings—Inches	2¾
Approximate Weight per Dozen—Pounds	7
Dozen in Carton	½
Dozen in Case	30
Dozen in Barrel—Bulk	60

Japanned or XC Plate Finish

No. 47 A—Wrought

Stiff Mouth



Mouth Piece 5¾ inches long, 7/16-inch material

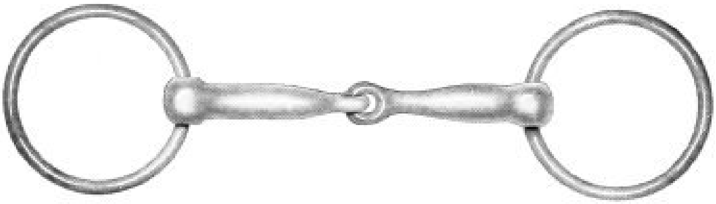
Gauge of Material in Rings	No. 2 (¼-inch)
Inside Diameter of Rings—Inches	2¾
Approximate Weight per Dozen—Pounds	7
Dozen in Carton	½
Dozen in Case	30
Dozen in Barrel—Bulk	50

Japanned or XC Plate Finish

Ring Bits

No. 47 B—Wrought

Jointed Mouth



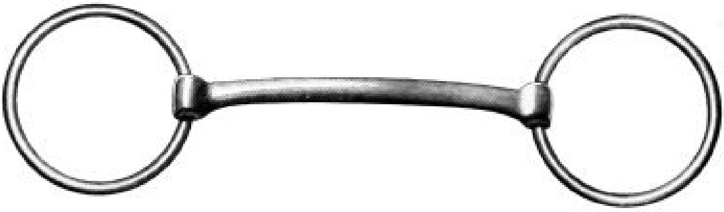
Mouth Piece 5¾ inches long, ⅜-inch material

Gauge of Material in Rings	No. 2 (¼-inch)
Inside Diameter of Rings—Inches	2½
Approximate Weight per Dozen—Pounds	6
Dozen in Carton	1
Dozen in Case	60
Dozen in Barrel—Bulk	70

Japanned or XC Plate Finish

No. 47 B—Wrought

Stiff Mouth



Mouth Piece 5¾ inches long, ⅜-inch material

Gauge of Material in Rings	No. 2 (¼-inch)
Inside Diameter of Rings—Inches	2½
Approximate Weight per Dozen—Pounds	6
Dozen in Carton	1
Dozen in Case	60
Dozen in Barrel—Bulk	60

Japanned or XC Plate Finish

Weldless Chain

ON the following pages of this section we illustrate our various types and sizes of Weldless Chain and Attachments, with details as to weights, tensile strengths and gauges.

Tensile strengths, as well as weights, are approximate.

All weldless chain items are furnished in bright finish unless otherwise specified.

Finishes

Weldless Chain

The standard finishes are as follows:

Bright or Polished: All scale and rough spots are removed, leaving a smooth, polished surface.

Japanned (Baked): This finish gives a black, glossy coating.

XC or Tinned: Obtained by immersing the product in a hot bath of tin.

Cold Galvanized (S. R. P.): Obtained by zinc electro-plating.

Hot Galvanized: The best rust preventative known.

Hercules: Obtained by copper electro-plating over hot galvanizing.

Nickel: Obtained by nickel electro-plating.

Brass: Obtained by brass electro-plating.

When ordering, always state the finish wanted.

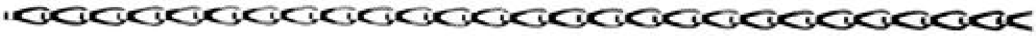
We are prepared to furnish practically any finish or special-treated chain required.

American Pattern Chain

THIS chain is made from flat stock. The links are blanked and assembled on special machines, insuring uniformity. It is smooth, flexible, and neat in appearance, and works freely over pulleys. In addition to being a general utility chain, it is especially adapted for use as friction chain on the warp beam of looms, for the suspension of arc lamps, and for use on agricultural implements and harvesting machines.

American Pattern

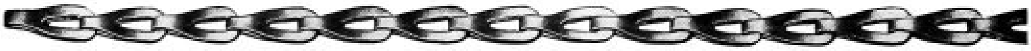
Illustrations are full size



No. 12

Tensile Strength, 50 lbs.

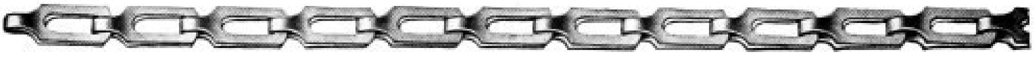
Weight per 100 feet, 8½ ozs.



No. 9½

Tensile Strength, 165 lbs.

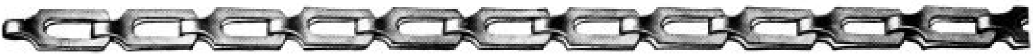
Weight per 100 feet, 1¾ lbs.



No. 9 Special

Tensile Strength, 205 lbs.

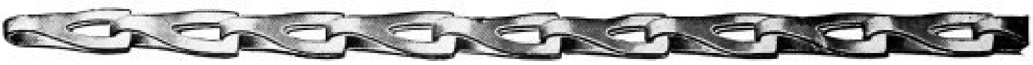
Weight per 100 feet, 2¾ lbs.



No. 91

Tensile Strength, 195 lbs.

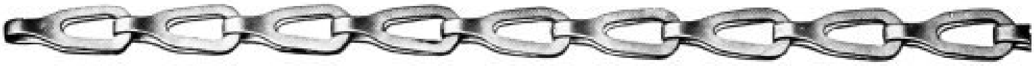
Weight per 100 feet, 2¾ lbs.



No. 8

Tensile Strength, 330 lbs.

Weight per 100 feet, 3½ lbs.



No. 8 Special

Tensile Strength, 245 lbs.

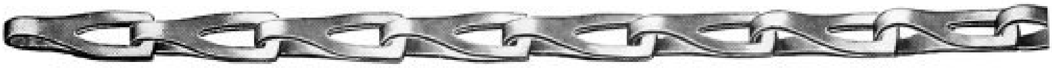
Weight per 100 feet, 3 lbs.

Packed 100 feet in a carton unless otherwise ordered

Weights and Tensile Strengths are approximate

American Pattern

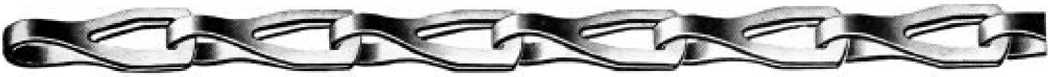
Illustrations are full size



No. 7

Tensile Strength, 395 lbs.

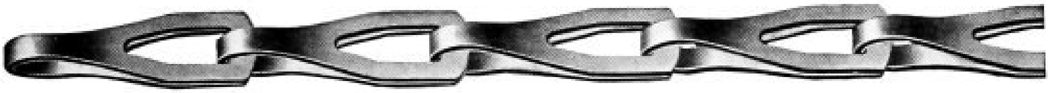
Weight per 100 feet, 3½ lbs.



No. 5

Tensile Strength, 510 lbs.

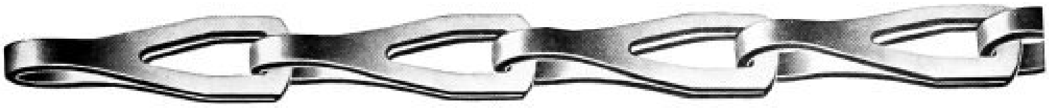
Weight per 100 feet, 6 lbs.



No. 3

Tensile Strength, 650 lbs.

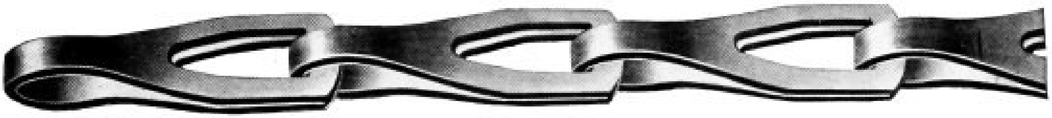
Weight per 100 feet, 8 lbs.



No. 1

Tensile Strength, 960 lbs.

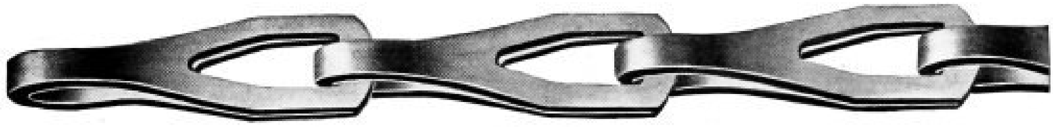
Weight per 100 feet, 10 lbs.



No. 2-0

Tensile Strength, 1540 lbs.

Weight per 100 feet, 16 lbs.



No. 4-0

Tensile Strength, 1800 lbs.

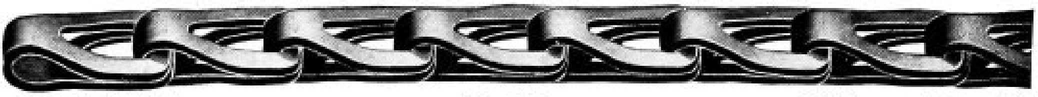
Weight per 100 feet, 21 lbs.

Packed 100 feet in a carton unless otherwise ordered

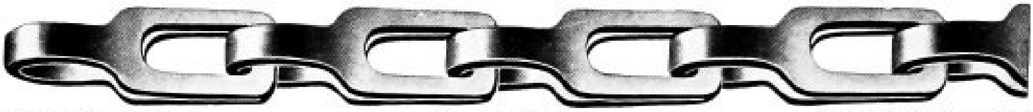
Weights and Tensile Strengths are approximate

American Pattern—Special

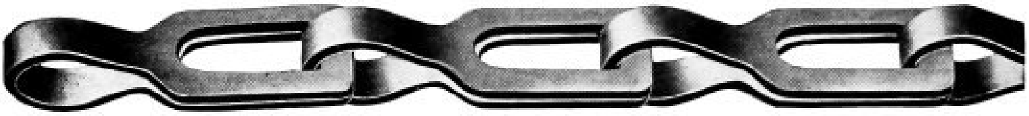
Illustrations are full size



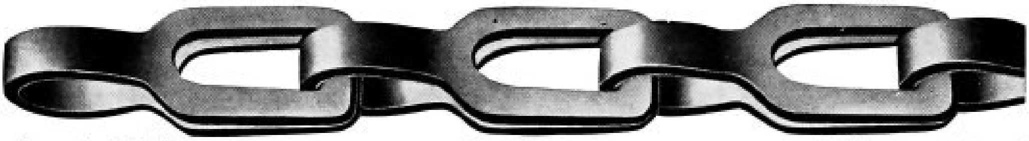
Tensile Strength, 1060 lbs. **No. 113** Weight per 100 feet, 12½ lbs.



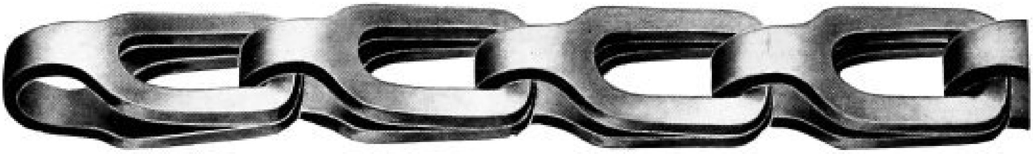
Tensile Strength, 1590 lbs. **No. 4-0 Special** Weight per 100 feet, 22 lbs.



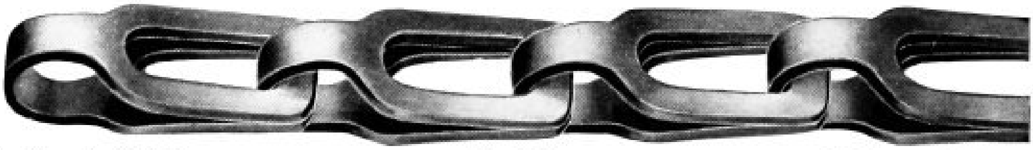
Tensile Strength, 1610 lbs. **No. 330** Weight per 100 feet, 20 lbs.



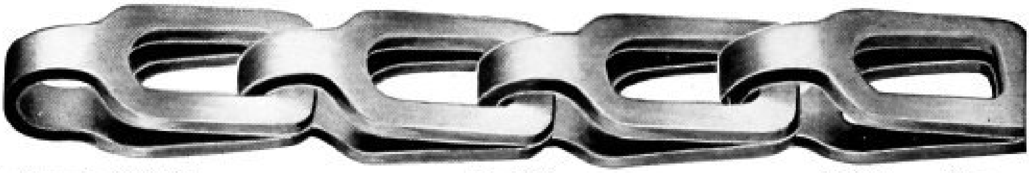
Tensile Strength, 2295 lbs. **No. 350** Weight per 100 feet, 26 lbs.



Tensile Strength, 1860 lbs. **No. 210** Weight per 100 feet, 36 lbs.



Tensile Strength, 1510 lbs. **No. 270** Weight per 100 feet, 25 lbs.

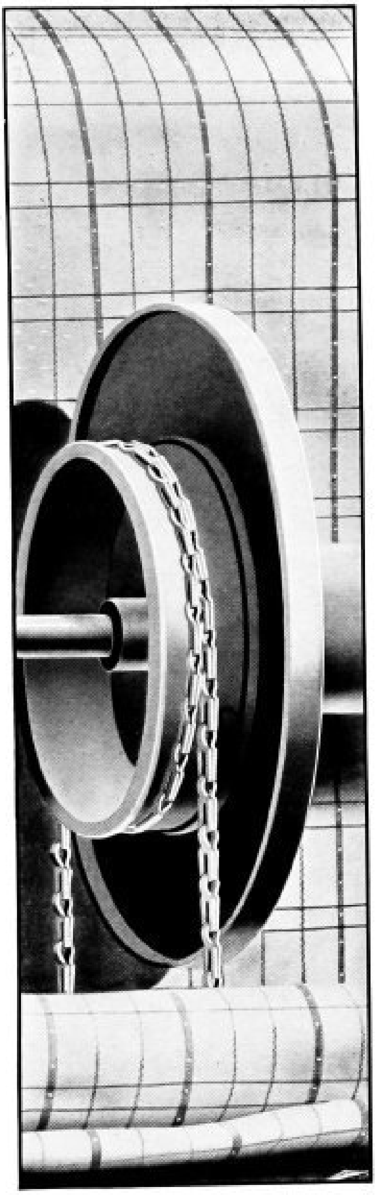


Tensile Strength, 3200 lbs. **No. 280** Weight per 100 feet, 40 lbs.

Packed 100 feet in a carton unless otherwise ordered

Weights and Tensile Strengths are approximate

American Loom Friction Chain



AMERICAN Friction Chain is made in various sizes, suitable for use on Cotton, Silk, Woolen Carpet, Blanket, Duck, Shawl, Ribbon, Tapestry or any other weaving looms. On the following page we illustrate a few of the most commonly used sizes.

This type of chain has many advantages over other devices (i. e., rope, bands, etc.) generally used as a means of obtaining the proper tension or friction on the warp beam of looms. One end of the chain is usually fastened to the frame of the loom by "S" hooks which we supply, the other end being wound once or twice around the end of the warp beam, depending on the amount of friction required, and fastened to the weight lever. If desired, the weights may be attached directly to the chain. American Friction Chain is not affected by climatic conditions, therefore will not stretch or take up, necessitating frequent adjustments. It outwears cord, rope, bands, etc., and insures perfect and uniform weaving.

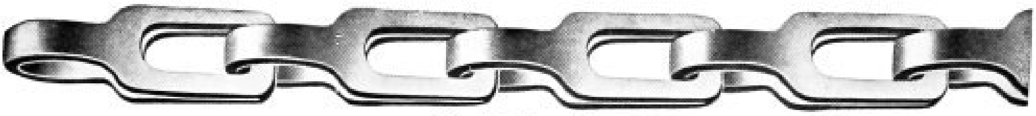
No. 4/0 Special and No. 20 are the sizes best suited for weaving medium-weight cotton, silk or woolen fabrics, while the No. 10 shows best results on lighter-weight materials. Nos. 210 or 280 should be used when weaving heavy goods, such as carpets, rugs, ducks, etc.

The No. 4 S Hook, illustrated on page 218, is the proper size for use in connection with our No. 4/0 Special, No. 20, or No. 10. The No. 17 S Hook, shown on page 219, should be used with our No. 210 or heavier chain. The experienced mill man will have no difficulty in choosing from the "full size" illustrations in this catalogue the sizes best suited to his particular kind of weaving.

Best results are obtained when the chain is used on edge as shown by the illustration on this page.

American Loom Friction Chain

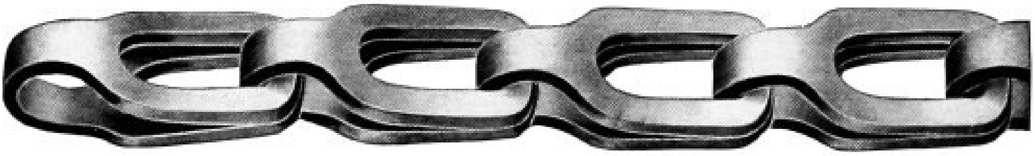
Illustrations are full size



No. 4-0 Special

Tensile Strength, 1590 lbs.

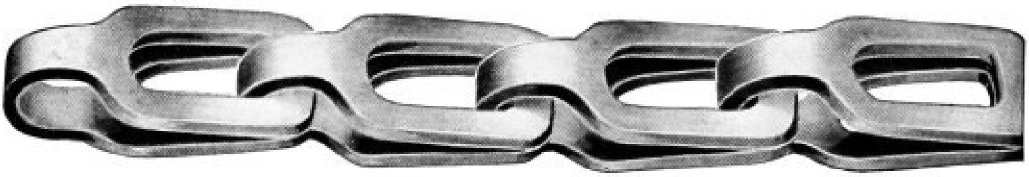
Weight per 100 feet, 22 lbs.



No. 210

Tensile Strength, 1860 lbs.

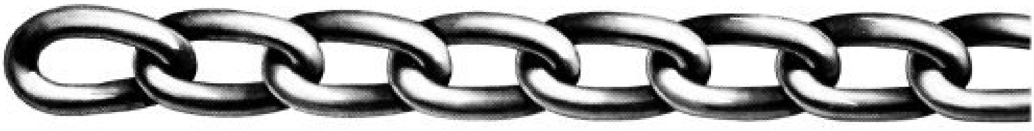
Weight per 100 feet, 36 lbs.



No. 280

Tensile Strength, 3200 lbs.

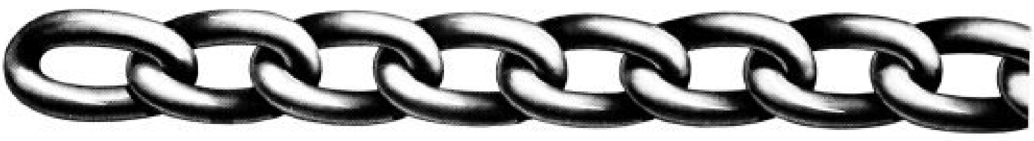
Weight per 100 feet, 41 lbs.



No. 10

Tensile Strength, 1310 lbs.

Weight per 100 feet, 29 lbs.



No. 20

Tensile Strength, 1510 lbs.

Weight per 100 feet, 34 lbs.

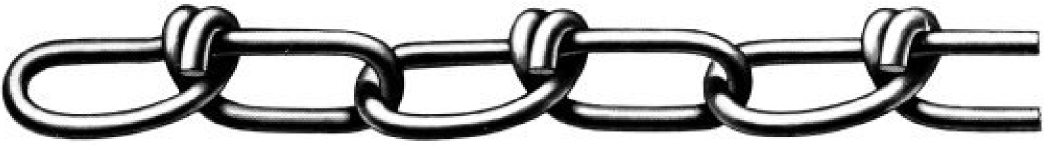
Packed on reels of 500 feet each.

Weights and Tensile Strengths are approximate

Wire Chains

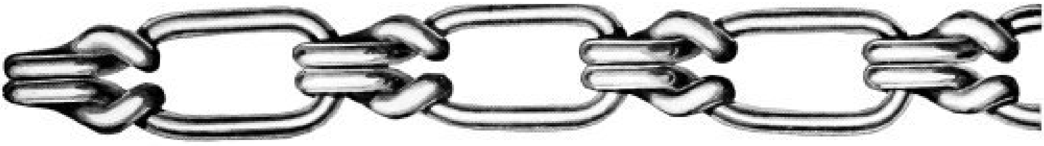
Tenso Pattern

("Tenso" Registered in U. S. Patent Office.)



Due to its general adaptability this pattern is used for Porch Swings, and for general hardware, manufacturing and agricultural purposes.

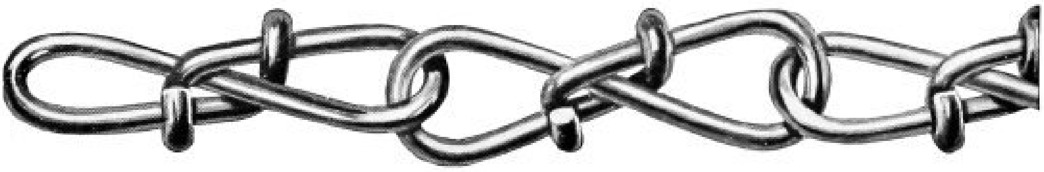
Lock Link Pattern



The peculiar construction of the links of this chain makes it especially adapted to many general uses. Some of the typical features are that it lies flat, is smooth, flexible, and allows of many adjustments. It is used extensively on light Conveyors, Rolling Shutters, Folding Doors, etc.

Niagara Pattern

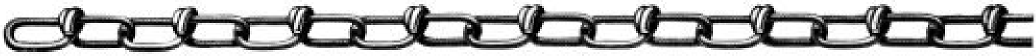
("Niagara" Registered in U. S. Patent Office.)



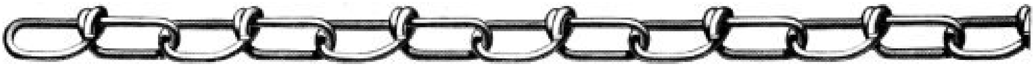
The links of this pattern are formed on the principle of the square knot, and the wire will break before the knot pulls apart.

Tenso Pattern

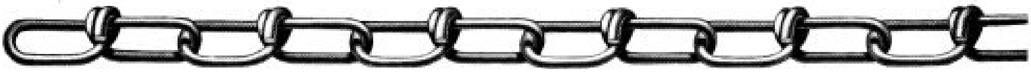
Illustrations are full size



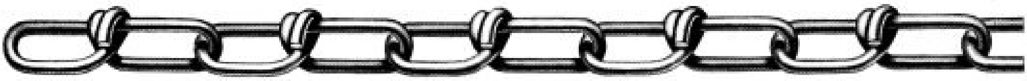
Tensile Strength, 175 lbs. 18 Ga. **No. 7** Weight per 100 feet, 2¼ lbs.



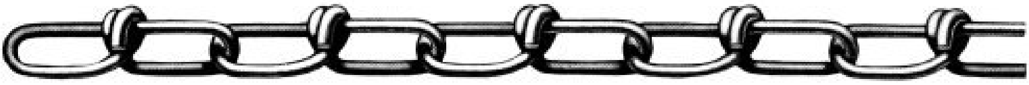
Tensile Strength, 200 lbs. 17 Ga. **No. 6** Weight per 100 feet, 2¾ lbs.



Tensile Strength, 260 lbs. 16 Ga. **No. 5** Weight per 100 feet, 3½ lbs.

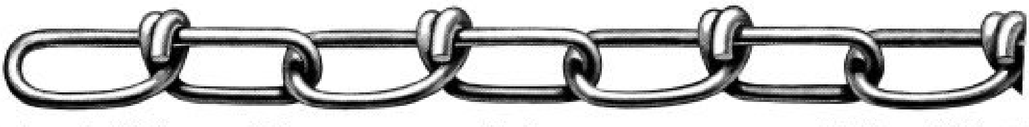


Tensile Strength, 320 lbs. 15 Ga. **No. 4** Weight per 100 feet, 4½ lbs.



Tensile Strength, 375 lbs. 14 Ga. **No. 3** Weight per 100 feet, 5¾ lbs.

Tensile Strength, 430 lbs. 13 Ga. **No. 2** Weight per 100 feet, 7½ lbs.



Tensile Strength, 785 lbs. 12 Ga. **No. 1** Weight per 100 feet, 10 lbs.

Tensile Strength, 1000 lbs. 11 Ga. **No. 1-0** Weight per 100 feet, 13 lbs.

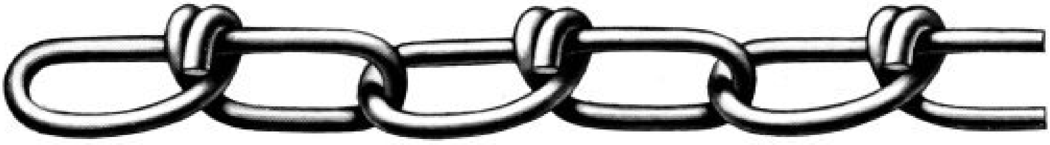
Packed 100 feet in a carton unless otherwise ordered

Weights and Tensile Strengths are approximate

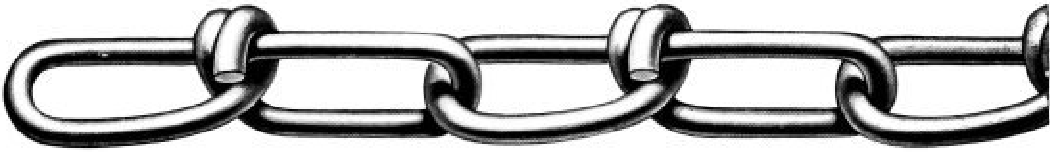
Table of Standard Wire Gauges on page 238

Tenso Pattern

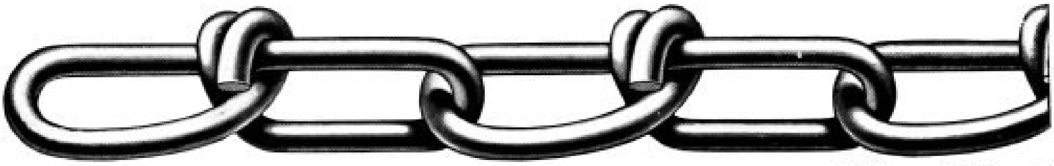
Illustrations are full size



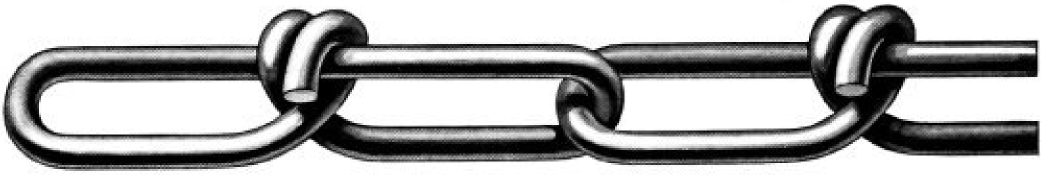
Tensile Strength, 1205 lbs. 10 Ga. **No. 2-0** Weight per 100 feet, 17 lbs.



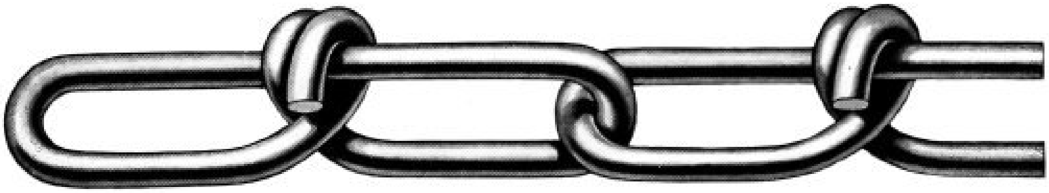
Tensile Strength, 1280 lbs. 9 Ga. **No. 3-0** Weight per 100 feet, 20 lbs.



Tensile Strength, 1500 lbs. 8 Ga. **No. 4-0** Weight per 100 feet, 23 lbs.



Tensile Strength, 1850 lbs. 7 Ga. **No. 5-0** Weight per 100 feet, 26 lbs.



Tensile Strength, 2025 lbs. 6 Ga. **No. 6-0** Weight per 100 feet, 32 lbs.

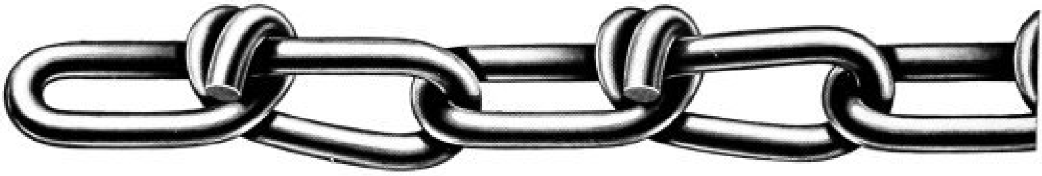
Packed 100 feet in a carton unless otherwise ordered

Weights and Tensile Strengths are approximate

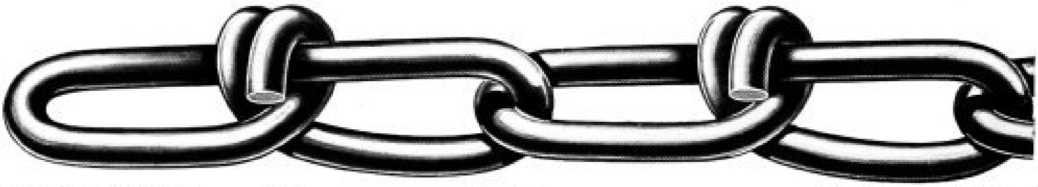
Table of Standard Wire Gauges on page 238

Tenso Pattern

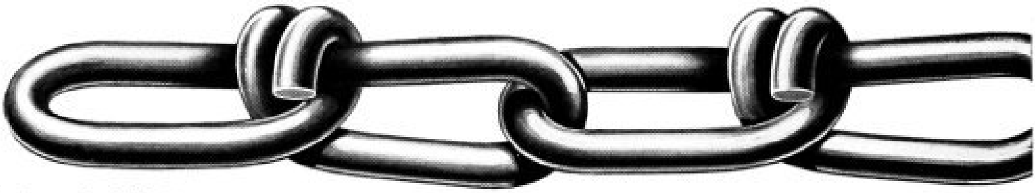
Illustrations are full size



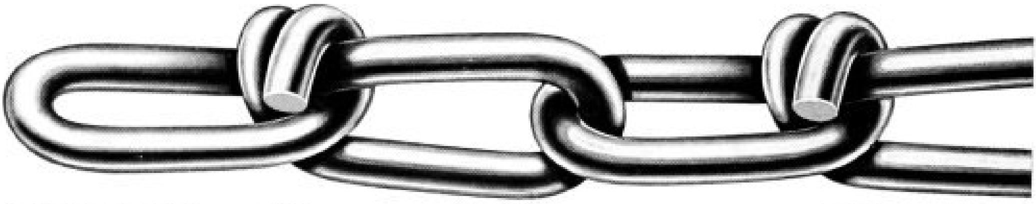
Tensile Strength, 2105 lbs. 6 Ga. **No. 6-0 Special** Weight per 100 feet, 37 lbs.



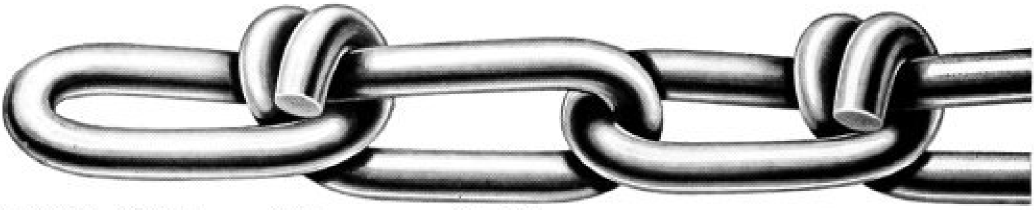
Tensile Strength, 2520 lbs. 5 Ga. **No. 7-0** Weight per 100 feet, 41 lbs.



Tensile Strength, 2850 lbs. 4 Ga. **No. 8-0** Weight per 100 feet, 47 lbs.



Tensile Strength, 3355 lbs. 3 Ga. **No. 9-0** Weight per 100 feet, 55 lbs.



Tensile Strength, 4525 lbs. 2 Ga. **No. 10-0** Weight per 100 feet, 67 lbs.

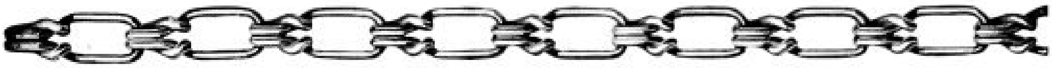
Packed 100 feet in a carton unless otherwise ordered

Weights and Tensile Strengths are approximate

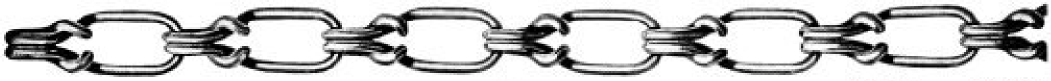
Table of Standard Wire Gauges on page 238

Lock Link Pattern

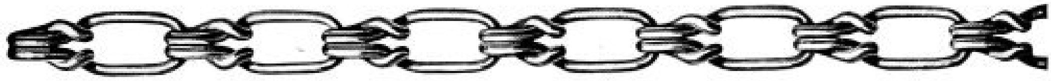
Illustrations are full size



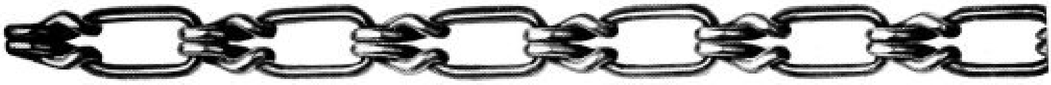
Tensile Strength, 180 lbs. 18 Ga. **No. 7** Weight per 100 feet, 2½ lbs.



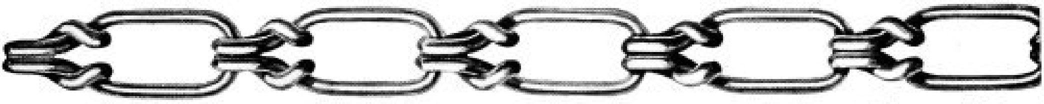
Tensile Strength, 205 lbs. 17 Ga. **No. 6** Weight per 100 feet, 3 lbs.



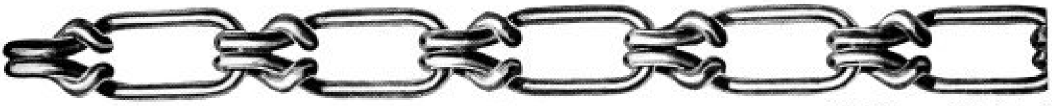
Tensile Strength, 320 lbs. 16 Ga. **No. 5** Weight per 100 feet, 4¼ lbs.



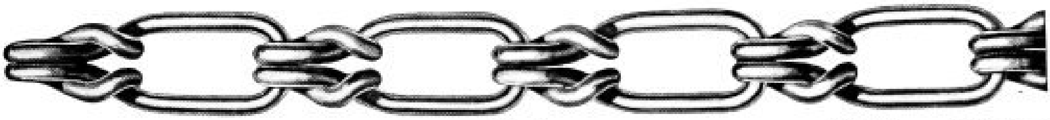
Tensile Strength, 405 lbs. 15 Ga. **No. 4** Weight per 100 feet, 6 lbs.



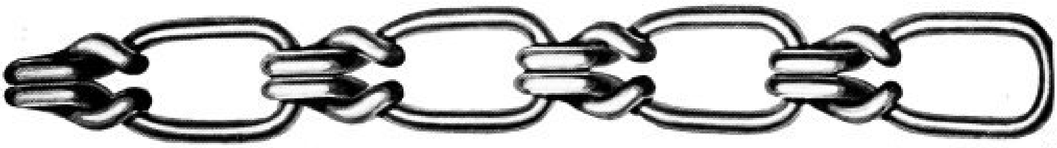
Tensile Strength, 495 lbs. 14 Ga. **No. 3** Weight per 100 feet, 7 lbs.



Tensile Strength, 560 lbs. 13 Ga. **No. 2** Weight per 100 feet, 10 lbs.



Tensile Strength, 940 lbs. 12 Ga. **No. 1** Weight per 100 feet, 13 lbs.



Tensile Strength, 1055 lbs. 11 Ga. **No. 1-0** Weight per 100 feet, 17 lbs.

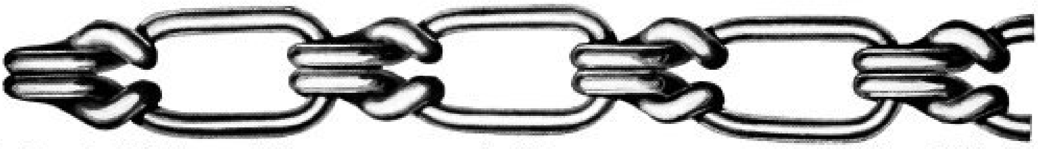
Packed 100 feet in a carton unless otherwise ordered

Weights and Tensile Strengths are approximate

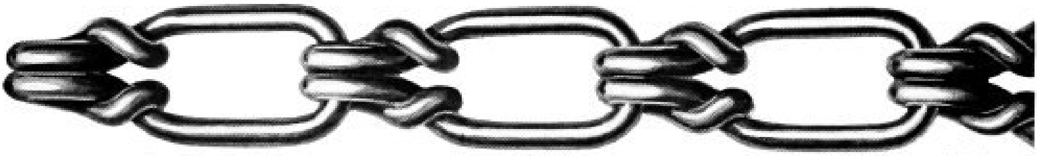
Table of Standard Wire Gauges on page 238

Lock Link Pattern

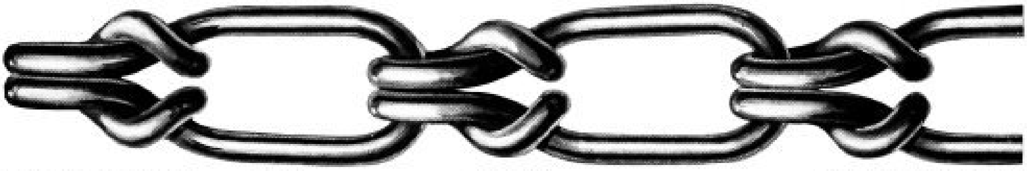
Illustrations are full size



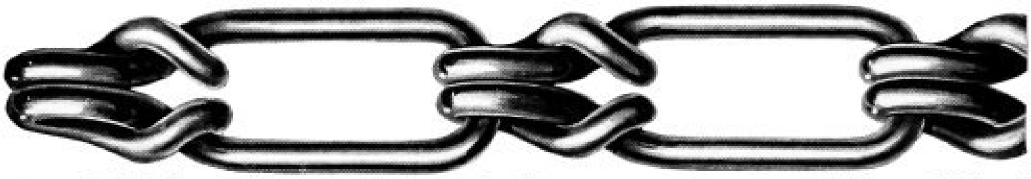
Tensile Strength, 1545 lbs. 10 Ga. **No. 2-0** Weight per 100 feet, 21 lbs.



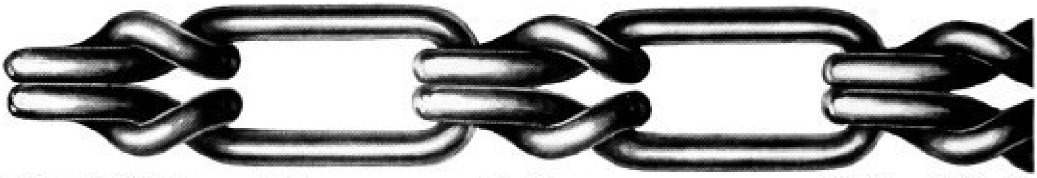
Tensile Strength, 1753 lbs. 9 Ga. **No. 3-0** Weight per 100 feet, 26 lbs.



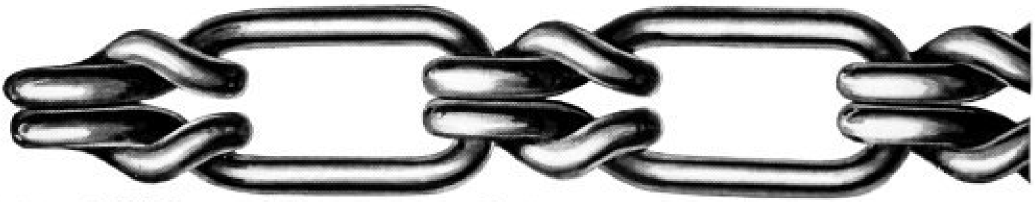
Tensile Strength, 1915 lbs. 8 Ga. **No. 4-0** Weight per 100 feet, 31 lbs.



Tensile Strength, 2440 lbs. 7 Ga. **No. 5-0** Weight per 100 feet, 35 lbs.



Tensile Strength, 2940 lbs. 6 Ga. **No. 6-0** Weight per 100 feet, 41 lbs.



Tensile Strength, 3325 lbs. 5 Ga. **No. 7-0** Weight per 100 feet, 50 lbs.

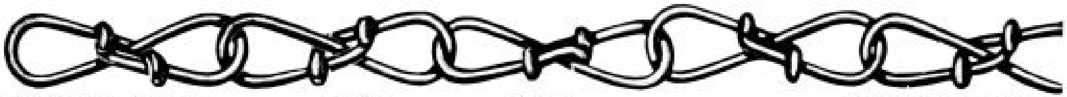
Packed 100 feet in a carton unless otherwise ordered

Weights and Tensile Strengths are approximate

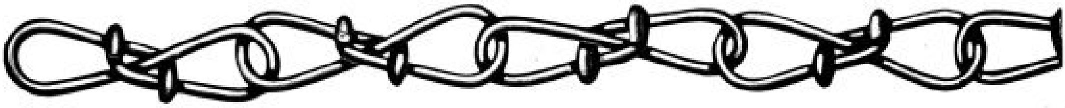
Table of Standard Wire Gauges on page 238

Niagara Pattern

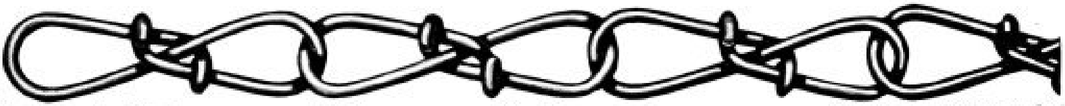
Illustrations are full size



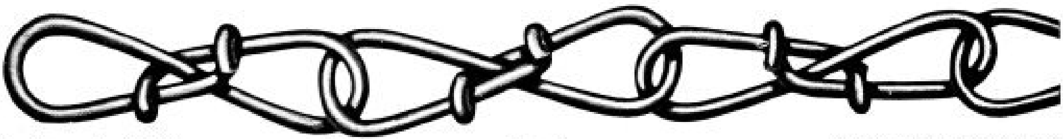
Tensile Strength, 285 lbs. 16 Ga. **No. 5** Weight per 100 feet, 3½ lbs.



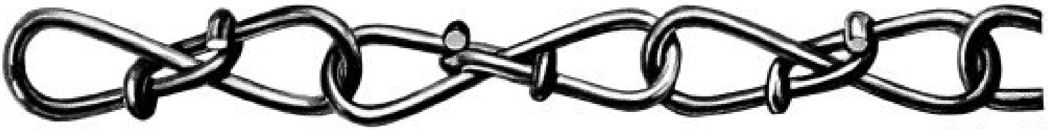
Tensile Strength, 420 lbs. 15 Ga. **No. 4** Weight per 100 feet, 4¾ lbs.



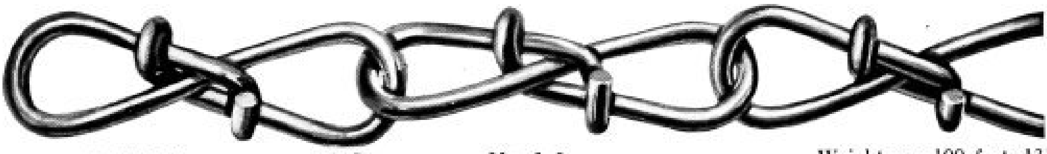
Tensile Strength, 505 lbs. 14 Ga. **No. 3** Weight per 100 feet, 5¾ lbs.



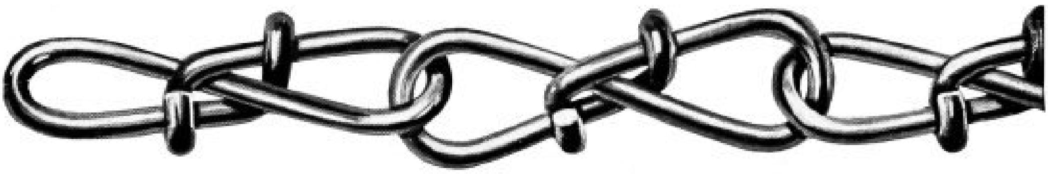
Tensile Strength, 690 lbs. 13 Ga. **No. 2** Weight per 100 feet, 7¾ lbs.



Tensile Strength, 900 lbs. 12 Ga. **No. 1** Weight per 100 feet, 10½ lbs.



Tensile Strength, 1130 lbs. 11 Ga. **No. 1-0** Weight per 100 feet, 13½ lbs.



Tensile Strength, 1370 lbs. 10 Ga **No. 2-0** Weight per 100 feet, 17 lbs.

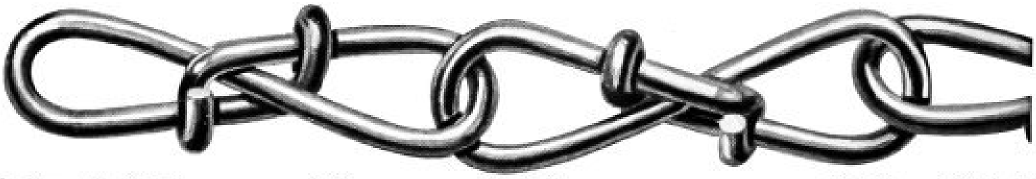
Packed 100 feet in a carton, unless otherwise ordered

Weights and Tensile Strengths are approximate

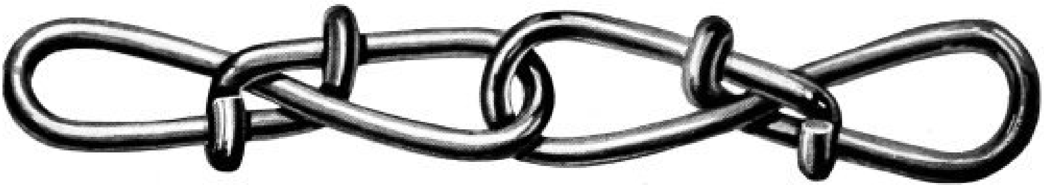
Table of Standard Wire Gauges on page 238

Niagara Pattern

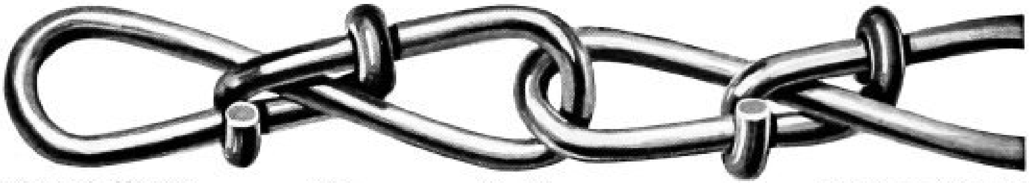
Illustrations are full size



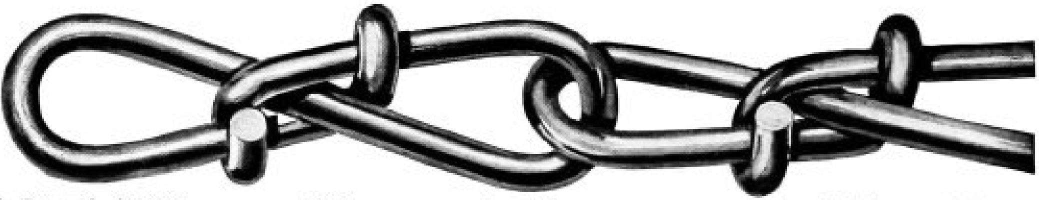
Tensile Strength, 1675 lbs. 9 Ga. **No. 3-0** Weight per 100 feet, 21 lbs.



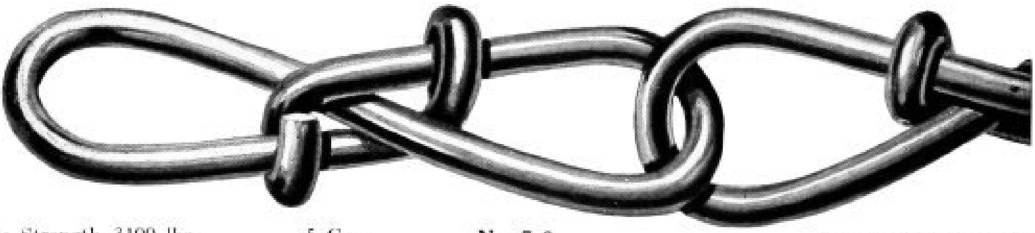
Tensile Strength, 1845 lbs. 8 Ga. **No. 4-0** Weight per 100 feet, 25 lbs.



Tensile Strength, 2220 lbs. 7 Ga. **No. 5-0** Weight per 100 feet, 30 lbs.



Tensile Strength, 2530 lbs. 6 Ga. **No. 6-0** Weight per 100 feet, 34 lbs.



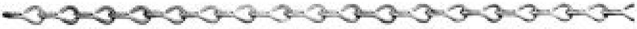
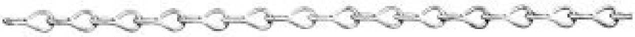
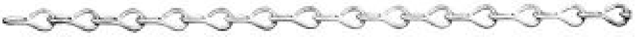
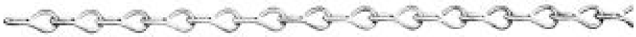
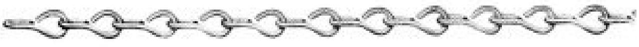
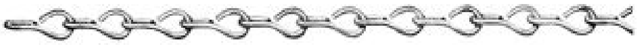
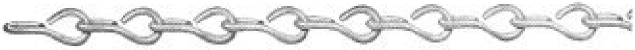
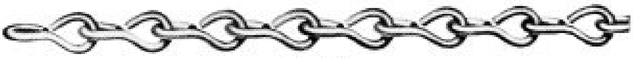
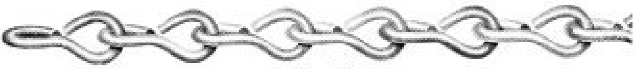
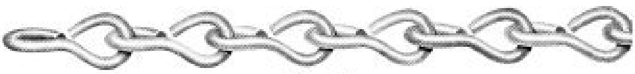
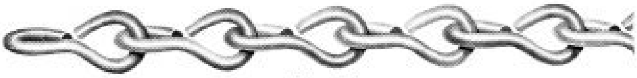
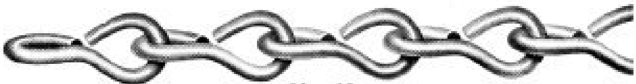
Tensile Strength, 3100 lbs. 5 Ga. **No. 7-0** Weight per 100 feet, 40 lbs.

Packed 100 feet in a carton, unless otherwise ordered

Weights and Tensile Strengths are approximate

Table of Standard Wire Gauges on page 238

Single Jack Chain

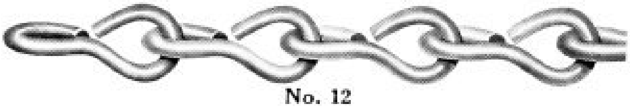
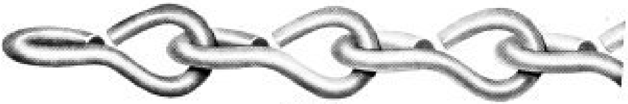
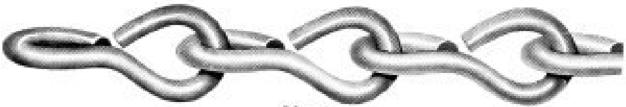
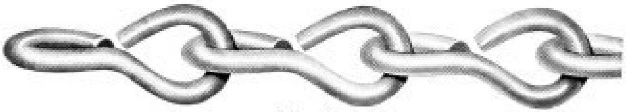
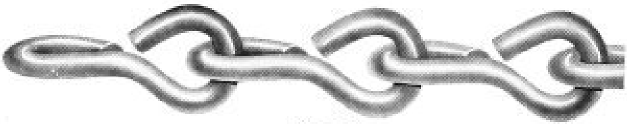
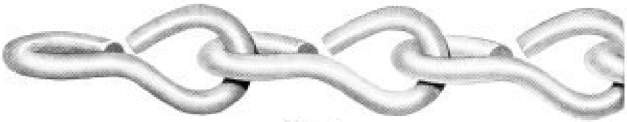
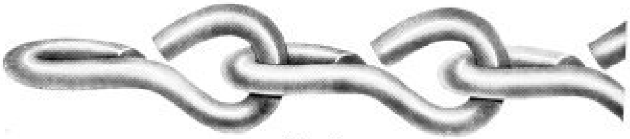
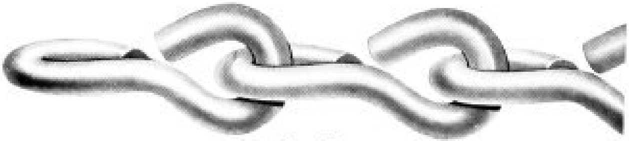
Weight per doz. yds., Brass	Brass or Steel	Weight per doz. yds., Steel
3 ozs.	 No. 24	3 ozs.
3½ ozs.	 No. 23	3¼ ozs.
4 ozs.	 No. 22	3¾ ozs.
4½ ozs.	 No. 21	4¼ ozs.
5½ ozs.	 No. 20	5¼ ozs.
7¾ ozs.	 No. 19	7¼ ozs.
10¼ ozs.	 No. 18	9¾ ozs.
13¾ ozs.	 No. 17	13 ozs.
1 lb. 3 ozs.	 No. 16	1 lb. 1 oz.
1 lb. 10 ozs.	 No. 15	1 lb. 8 ozs
1 lb. 12 ozs.	 No. 14	1 lb. 10 ozs.
2 lbs. 6 ozs.	 No. 13	2 lbs. 3 ozs

Packed in cartons of 1 dozen yards each

Table of Standard Wire Gauges on page 238

Single Jack Chain

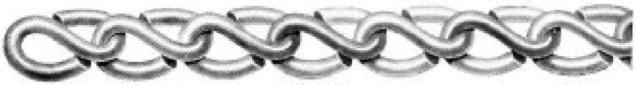
Brass or Steel

Weight per doz. yds., Brass		Weight per doz. yds., Steel
3 lbs. 5 ozs.	 No. 12	3 lbs. 1 oz.
4 lbs. 5 ozs.	 No. 11	4 lbs.
5 lbs. 3 ozs.	 No. 10	4 lbs. 14 ozs.
6 lbs. 4 ozs.	 No. 9	5 lbs. 13 ozs.
8 lbs.	 No. 8	7 lbs. 8 ozs.
9 lbs. 4 ozs.	 No. 7	8 lbs. 10 ozs.
11 lbs. 8 ozs.	 No. 6	10 lbs. 11 ozs.
13 lbs.	 No. 5	12 lbs. 2 ozs.

Packed in cartons of 1 dozen yards each

Table of Standard Wire Gauges on page 238

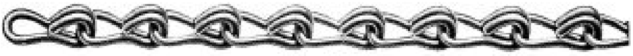
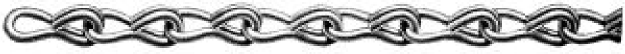
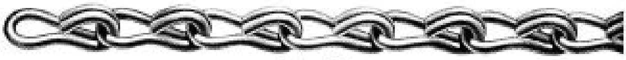
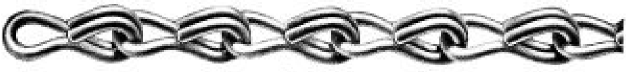
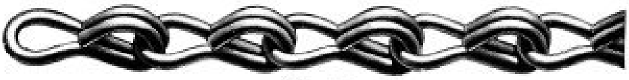
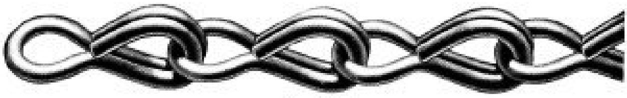
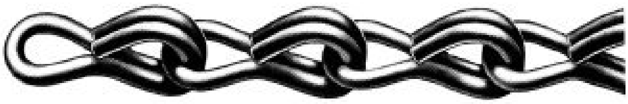
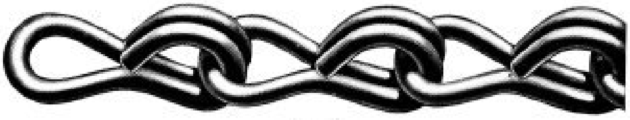
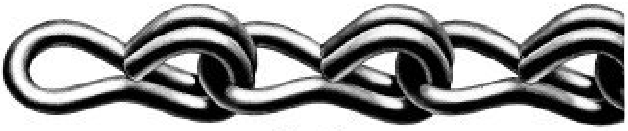
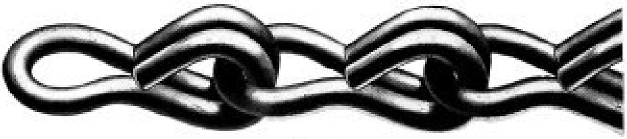
Double Jack Chain

Weight per doz. yds., Brass	Brass or Steel	Weight per doz. yds., Steel
3½ ozs.	No. 24	3¼ ozs.
4¼ ozs.	No. 23	4 ozs.
5 ozs.	No. 22	4¾ ozs.
6½ ozs.	No. 21	5½ ozs.
8 ozs.	No. 20	7 ozs.
9¾ ozs.	No. 19	9¼ ozs.
14 ozs.	No. 18	12¼ ozs.
1 lb. 3 ozs.	No. 17	1 lb. 1 oz.
1 lb. 10 ozs.	No. 16	1 lb. 8 ozs.
2 lbs. 3 ozs.	No. 15	2 lbs. 1 oz.
2 lbs. 14 ozs.	No. 14	2 lbs. 11 ozs.
3 lbs. 6 ozs.	No. 13	3 lbs. 3 ozs.
4 lbs. 11 ozs.	 No. 12	4 lbs. 5 ozs.
6 lbs. 6 ozs.	No. 11	6 lbs.
7 lbs. 7 ozs.	No. 10	7 lbs.

Packed in cartons of 1 dozen yards each

Table of Standard Wire Gauges on page 238

Safe or Register Chain

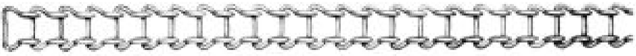
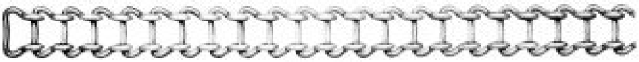
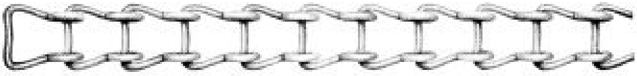
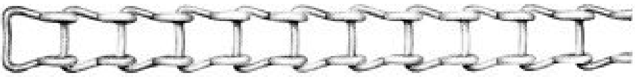
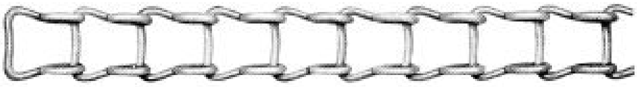
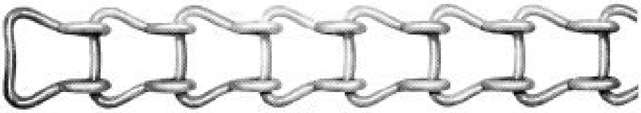
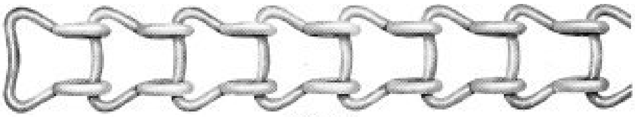
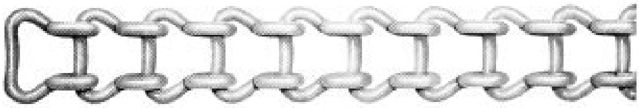
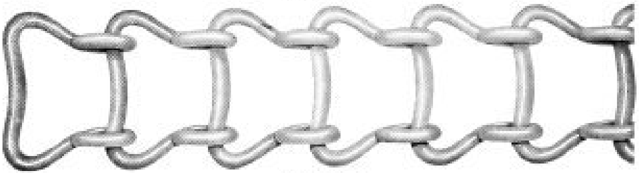
Weight per doz. yds., Brass	Brass or Steel	Weight per doz. yds., Steel
1 lb.	 **No. 18**	15 ozs.
1 lb. 6 ozs.	 **No. 17**	1 lb. 4 ozs.
1 lb. 12 ozs.	 **No. 16**	1 lb. 10 ozs.
2 lbs. 2 ozs.	 **No. 15**	1 lb. 14 ozs.
3 lbs. 2 ozs.	 **No. 14**	2 lbs. 14 ozs.
4 lbs.	 **No. 13**	3 lbs. 10 ozs.
5 lbs. 5 ozs.	 **No. 12**	4 lbs. 14 ozs.
6 lbs. 7 ozs.	 **No. 11**	6 lbs.
8 lbs. 9 ozs.	 **No. 10**	7 lbs. 15 ozs.
10 lbs. 3 ozs.	 **No. 9**	9 lbs. 8 ozs.

Packed in cartons of 1 dozen yards each

Table of Standard Wire Gauges on page 238

Ladder Chain

Brass or Steel

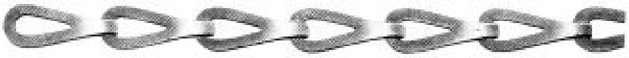
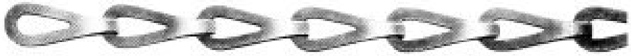
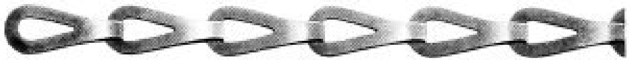
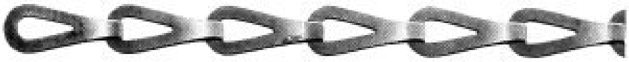
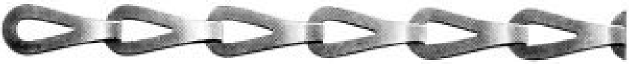
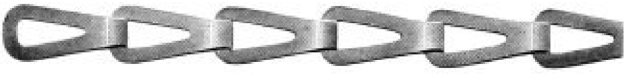
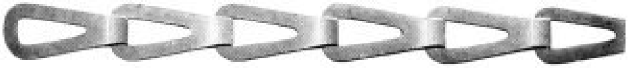
Weight per doz. yds., Brass		Weight per doz. yds., Steel
8 ozs.	 **No. 22**	7¾ ozs.
13 ozs.	 **No. 20**	10½ ozs.
13¾ ozs.	 **No. 19**	12 ozs.
1 lb. 3 ozs.	 **No. 18**	1 lb.
1 lb. 10½ ozs.	 **No. 17**	1 lb. 9 ozs.
2 lbs. 6 ozs.	 **No. 16**	1 lb. 12½ ozs.
2 lbs. 14 ozs.	 **No. 15**	2 lbs. 11 ozs.
3 lbs. 10 ozs.	 **No. 14**	2 lbs. 15½ ozs.
6 lbs. 14 ozs.	 **No. 12**	6 lbs. 3½ ozs.

Packed in cartons of 1 dozen yards each

Table of Standard Wire Gauges on page 238

Plumbers Chain

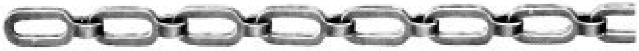
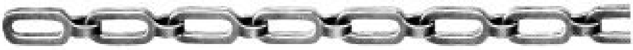
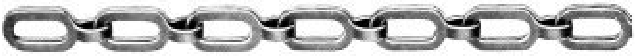
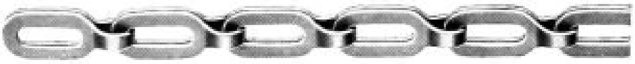
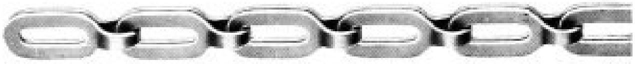
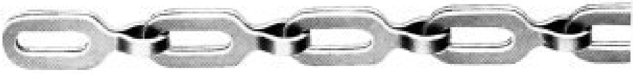
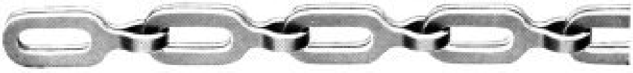
Brass or Steel

Weight per dozen yards		Gauge of Material Inches
7 ozs.	 **No. 000**	.015
11 ozs.	 **No. 00**	.018
12 ozs.	 **No. 0**	.022
1 lb.	 **No. 1**	.027
1 lb. 3 ozs.	 **No. 2**	.032
1 lb. 12 ozs.	 **No. 3**	.037
2 lbs. 6 ozs.	 **No. 4**	.042

Packed in cartons of 1 dozen yards each or on reels of 500 feet each

Safety Chain

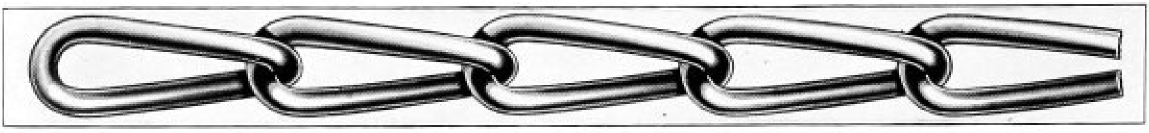
Brass or Steel

Weight per dozen yards		Gauge of Material Inches
6½ ozs.	 **No. 000**	.015
8 ozs.	 **No. 00**	.018
10 ozs.	 **No. 0**	.022
1 lb. 4 ozs.	 **No. 1**	.027
1 lb. 9 ozs.	 **No. 2**	.032
1 lb. 11 ozs.	 **No. 3**	.037
2 lbs.	 **No. 4**	.042

Packed in cartons of 1 dozen yards each or on reels of 500 feet each

Well Chain

Elwel Pattern—Twist Link



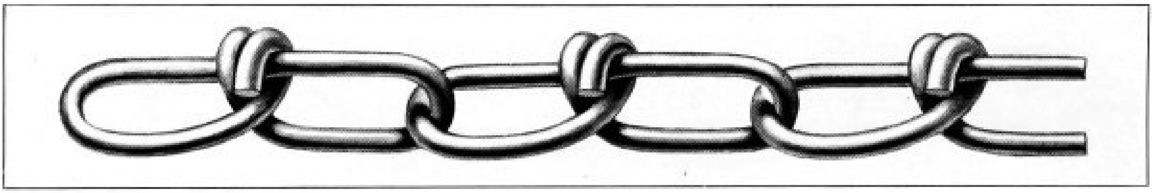
No. 2

Furnished in the following sizes. Hot Galvanized and S. R. P.

Number	Gauge	Weight per 100 feet Pounds	Tensile Strength Pounds	Number	Gauge	Weight per 100 feet Pounds	Tensile Strength Pounds
3	10 — $\frac{9}{64}$-in.	13	830	1/0	7 — $\frac{11}{64}$-in.	23	1240
2	9 — $\frac{5}{32}$-in.—	16	950	2/0	6 — $\frac{3}{16}$-in.	28	1430
1	8 — $\frac{5}{32}$-in.+	20	1080				

Packing : 500 feet in a keg.

Tenso Pattern



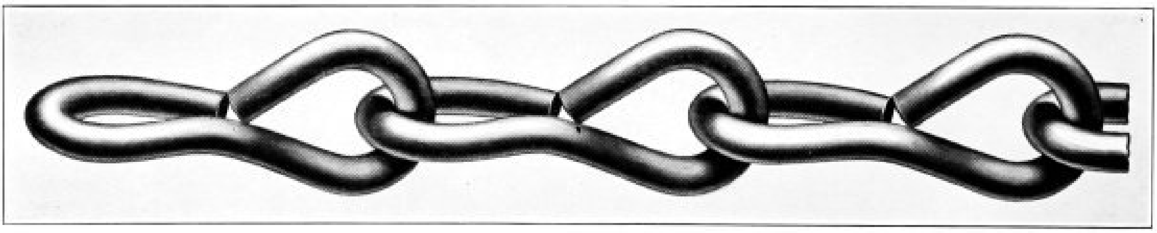
No. 2-0

Furnished in the following sizes. Hot Galvanized and S. R. P.

Number	Gauge	Weight per 100 feet Pounds	Tensile Strength Pounds	Number	Gauge	Weight per 100 feet Pounds	Tensile Strength Pounds
1	12	10	785	3/0	9	20	1280
1/0	11	13	1000	4/0	8	23	1500
2/0	10	17	1205				

Packing : 250 feet and 500 feet on reels.

Pump Chain



No. 6

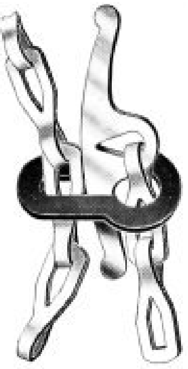
Furnished in the following sizes. Hot Galvanized Finish only.

Number	Size	Weight per 100 feet Pounds
5	.207-in.	32
6	.192-in.	27

Packing : 500 pounds in a barrel or 100 pounds in a keg.

Weights and Tensile Strengths are approximate.

Table of Standard Wire Gauges on page 238



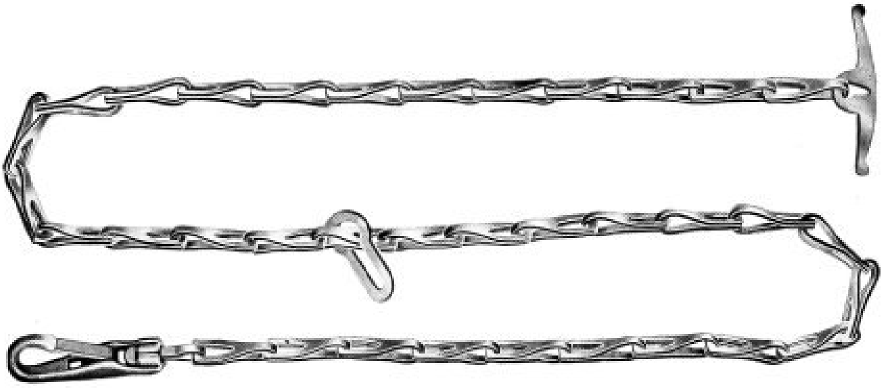
Lock Ring

Halter and Dog Chains

American Pattern

Fitted with an adjustable Lock Ring, Toggle and Malleable Swivel Snap.

Halter Chain sizes No. 4/0 to No. 1/0 inclusive.
Dog Chain Sizes No. 1 to No. 8 inclusive.



Number	4½ Feet		6 Feet	
	Approximate Weight per Dozen	Quantity in Each Carton	Approximate Weight per Dozen	Quantity in Each Carton
4/0	14 pounds	½ dozen	18 pounds	½ dozen
3/0	14 pounds	½ dozen	18 pounds	½ dozen
2/0	11 pounds	½ dozen	14 pounds	½ dozen
1/0	11 pounds	½ dozen	14 pounds	½ dozen
1	7¾ pounds	1 dozen	9½ pounds	1 dozen
2	7¾ pounds	1 dozen	9½ pounds	1 dozen
3	6 pounds	1 dozen	7¼ pounds	1 dozen
4	6 pounds	1 dozen	7¼ pounds	1 dozen
5	4 pounds	1 dozen	5 pounds	1 dozen
6	4 pounds	1 dozen	5 pounds	1 dozen
7	2¾ pounds	1 dozen	3½ pounds	1 dozen
8	2½ pounds	1 dozen	3 pounds	1 dozen

Can be furnished with two Toggles or with two Snaps instead of Toggle and Snap.

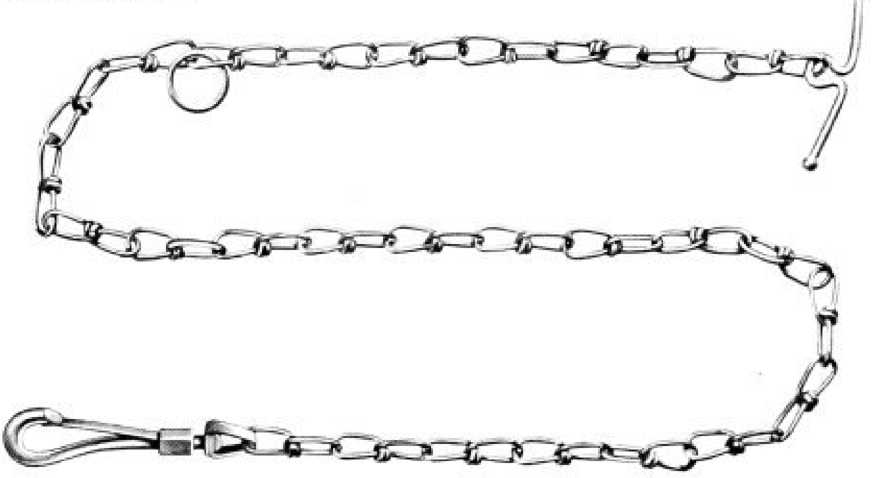
For Welded Halter Chains see pages 97 and 98

Halter and Dog Chains

Tenso Pattern

Fitted with Welded Ring, Wire Toggle and Snap.

Halter Chain sizes No. 6/0 to No. 1/0 inclusive.
Dog Chain sizes No. 1 to No. 7 inclusive.



Number	W. & M. Gauge	4½ Feet		6 Feet	
		Approximate Weight per Dozen	Quantity in Each Carton	Approximate Weight per Dozen	Quantity in Each Carton
6/0	6	20 pounds	½ dozen	26 pounds	½ dozen
5/0	7	17 pounds	½ dozen	23 pounds	½ dozen
4/0	8	16 pounds	½ dozen	20 pounds	½ dozen
3/0	9	14 pounds	½ dozen	17 pounds	½ dozen
2/0	10	12 pounds	½ dozen	16 pounds	½ dozen
1/0	11	9½ pounds	½ dozen	11 pounds	½ dozen
1	12	7 pounds	1 dozen	8¾ pounds	1 dozen
2	13	5¾ pounds	1 dozen	7½ pounds	1 dozen
3	14	4 pounds	1 dozen	5¼ pounds	1 dozen
4	15	3½ pounds	1 dozen	5¼ pounds	1 dozen
5	16	2½ pounds	1 dozen	3¼ pounds	1 dozen
6	17	2¼ pounds	1 dozen	2¾ pounds	1 dozen
7	18	2¼ pounds	1 dozen	2¾ pounds	1 dozen

Can be furnished with two Toggles or with two Snaps instead of Toggle and Snap

For Welded Halter Chains see pages 97 and 98

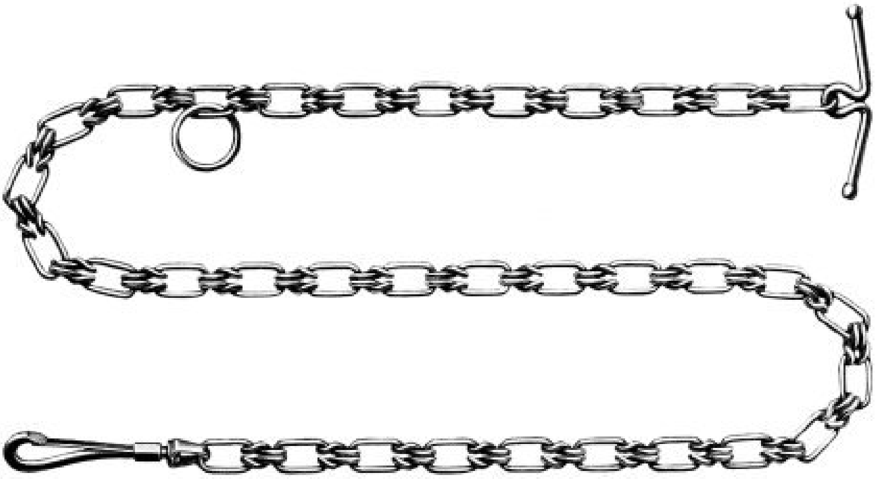
Table of Standard Wire Gauges on page 238

Halter and Dog Chains

Lock Link Pattern

Fitted with Welded Ring, Wire Toggle and Snap.

Halter Chain sizes No. 6/0 to No. 1/0 inclusive.
Dog Chain sizes No. 1 to No. 7 inclusive.



Number	W. & M. Gauge	4½ Feet		6 Feet	
		Approximate Weight per Dozen	Quantity in Each Carton	Approximate Weight per Dozen	Quantity in Each Carton
6/0	6	29 pounds	½ dozen	38 pounds	½ dozen
5/0	7	21 pounds	½ dozen	28 pounds	½ dozen
4/0	8	19 pounds	½ dozen	25 pounds	½ dozen
3/0	9	17 pounds	½ dozen	21 pounds	½ dozen
2/0	10	14 pounds	½ dozen	17 pounds	½ dozen
1/0	11	12 pounds	½ dozen	15 pounds	½ dozen
1	12	8 pounds	1 dozen	11 pounds	1 dozen
2	13	7½ pounds	1 dozen	9¼ pounds	1 dozen
3	14	5 pounds	1 dozen	6¼ pounds	1 dozen
4	15	4 pounds	1 dozen	5¼ pounds	1 dozen
5	16	3¾ pounds	1 dozen	4½ pounds	1 dozen
6	17	3 pounds	1 dozen	3½ pounds	1 dozen
7	18	2¼ pounds	1 dozen	2¾ pounds	1 dozen

Can be furnished with two Toggles or with two Snaps instead of Toggle and Snap

For Welded Halter Chains see pages 97 and 98

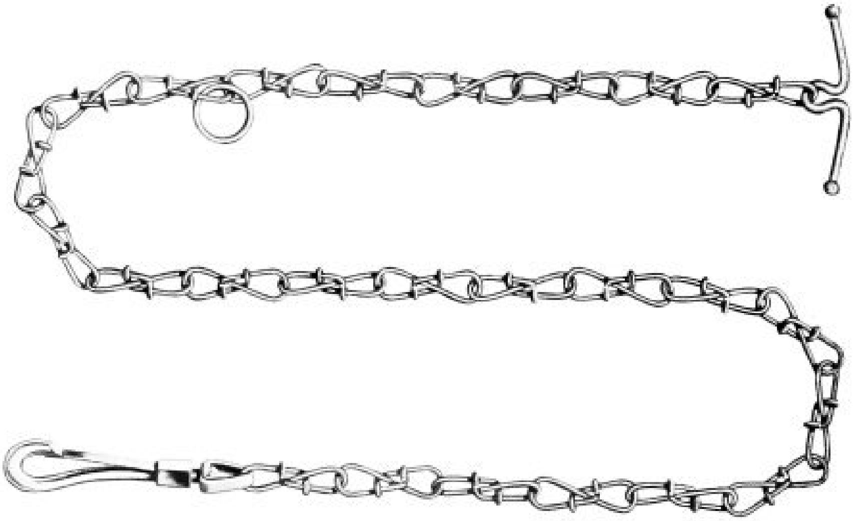
Table of Standard Wire Gauges on page 238

Halter and Dog Chains

Niagara Pattern

Fitted with Welded Ring, Wire Toggle and Snap.

Halter Chain sizes No. 4/0 to No. 1/0 inclusive.
Dog Chain sizes No. 1 to No. 5 inclusive.



Number	W. & M. Gauge	4½ Feet		6 Feet	
		Approximate Weight per Dozen	Quantity in Each Carton	Approximate Weight per Dozen	Quantity in Each Carton
4/0	8	16 pounds	½ dozen	20 pounds	½ dozen
3/0	9	15 pounds	½ dozen	18 pounds	½ dozen
2/0	10	12 pounds	½ dozen	16 pounds	½ dozen
1/0	11	10 pounds	½ dozen	13 pounds	½ dozen
1	12	7¼ pounds	1 dozen	9¼ pounds	½ dozen
2	13	6 pounds	1 dozen	7¼ pounds	½ dozen
3	14	5 pounds	1 dozen	6 pounds	1 dozen
4	15	3½ pounds	1 dozen	4¼ pounds	1 dozen
5	16	2¾ pounds	1 dozen	3¼ pounds	1 dozen

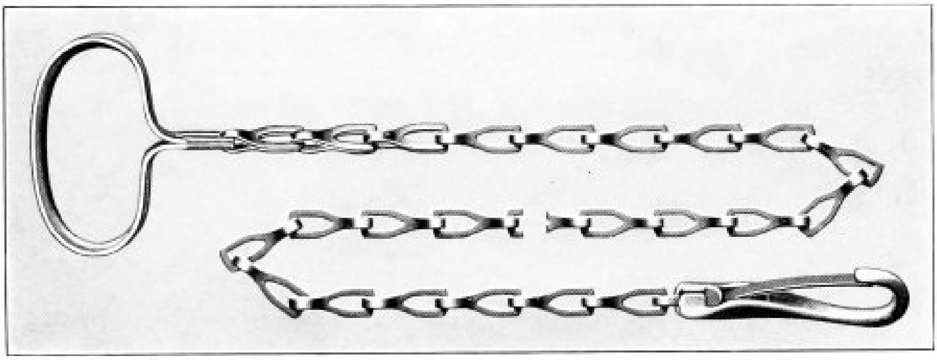
Can be furnished with two Toggles or with two Snaps instead of Toggle and Snap

For Welded Halter Chains see pages 97 and 98

Table of Standard Wire Gauges on page 238

Dog Leads

American Pattern



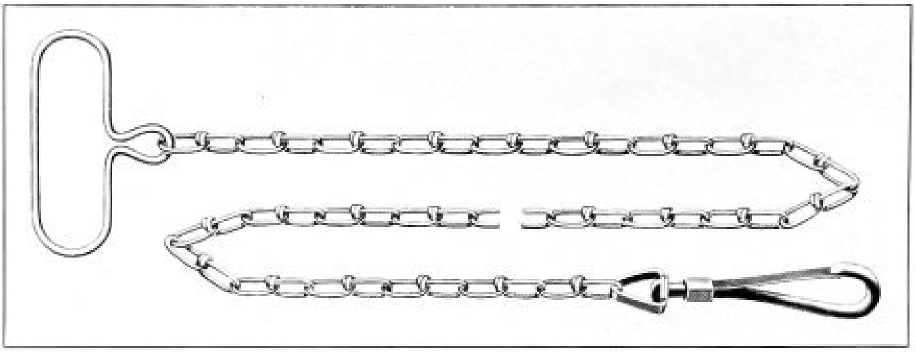
Fitted with broad flat Grip and Malleable Snap

Number	Length	Approximate Weight per Dozen	Quantity in Each Carton
4/0 Extra large	4 feet	11 pounds	½ dozen
	5 feet	14 pounds	½ dozen
	6 feet	16 pounds	½ dozen
2/0 Large	4 feet	10½ pounds	½ dozen
	5 feet	10¾ pounds	½ dozen
	6 feet	11¼ pounds	½ dozen
1 Medium	4 feet	7 pounds	1 dozen
	5 feet	7½ pounds	1 dozen
	6 feet	8½ pounds	½ dozen
5 Small	4 feet	3¼ pounds	1 dozen
	5 feet	4 pounds	1 dozen
	6 feet	4¾ pounds	1 dozen

Furnished in Bright or Nickel-Plated Finish

Dog Leads

Tenso Pattern



Fitted with round wire Grip and wire Snap

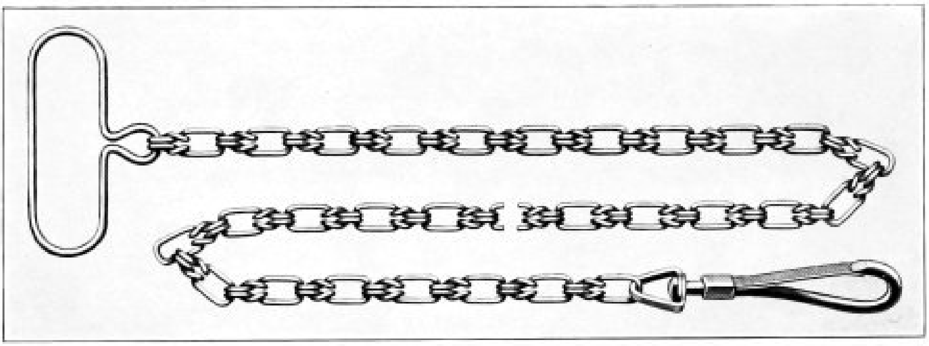
Number	W. & M. Gauge	Length	Approximate Weight per Dozen	Quantity in Each Carton
4	15	4 feet	2¼ pounds	1 dozen
		5 feet	3¼ pounds	1 dozen
		6 feet	4¼ pounds	1 dozen
5	16	4 feet	2 pounds	1 dozen
		5 feet	3 pounds	1 dozen
		6 feet	4 pounds	1 dozen
6	17	4 feet	1½ pounds	1 dozen
		5 feet	2¼ pounds	1 dozen
		6 feet	3 pounds	1 dozen

Furnished in Bright or Nickel-Plated Finish

Table of Standard Wire Gauges on page 238

Dog Leads

Lock Link Pattern



Fitted with round wire Grip and wire Snap

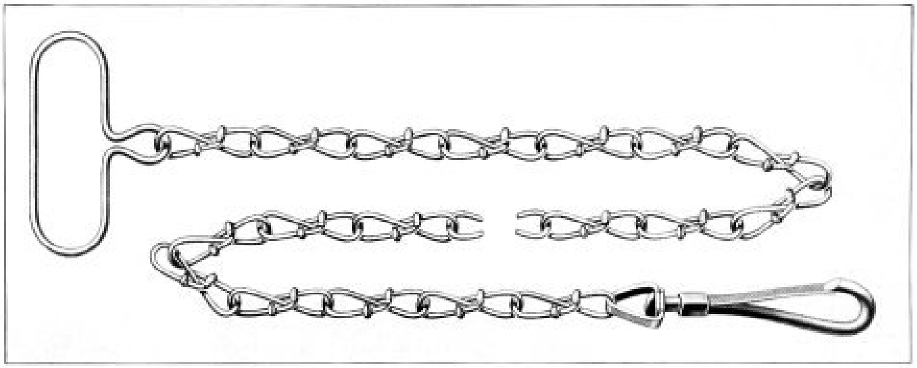
Number	W. & M. Gauge	Length	Approximate Weight per Dozen	Quantity in Each Carton
4	15	4 feet	2¾ pounds	1 dozen
		5 feet	4 pounds	1 dozen
		6 feet	5¼ pounds	1 dozen
5	16	4 feet	2½ pounds	1 dozen
		5 feet	3¾ pounds	1 dozen
		6 feet	5 pounds	1 dozen
6	17	4 feet	2 pounds	1 dozen
		5 feet	2¾ pounds	1 dozen
		6 feet	3½ pounds	1 dozen

Furnished in Bright or Nickel-Plated Finish

Table of Standard Wire Gauges on page 238

Dog Leads

Niagara Pattern



Fitted with round wire Grip and wire Snap

Number	W. & M. Gauge	Length	Approximate Weight per Dozen	Quantity in Each Carton
3	14	4 feet	3¼ pounds	1 dozen
		5 feet	4 pounds	1 dozen
		6 feet	4¾ pounds	1 dozen
4	15	4 feet	2¾ pounds	1 dozen
		5 feet	3¼ pounds	1 dozen
		6 feet	3¾ pounds	1 dozen
5	16	4 feet	2¼ pounds	1 dozen
		5 feet	2¾ pounds	1 dozen
		6 feet	3 pounds	1 dozen

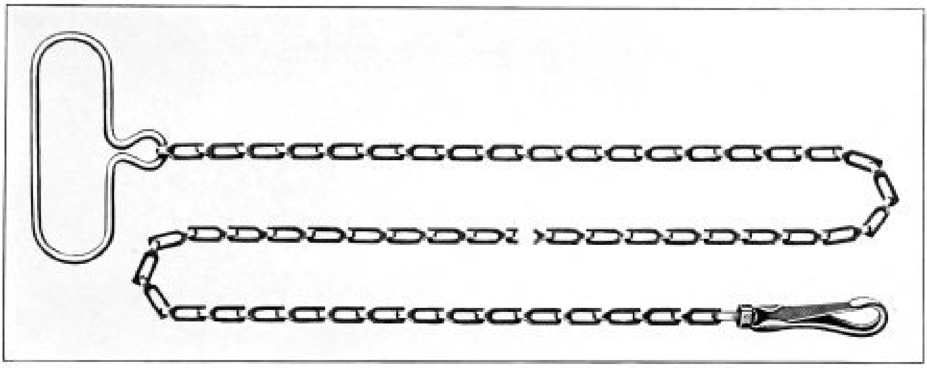
Furnished in Bright or Nickel-Plated Finish

Table of Standard Wire Gauges on page 238

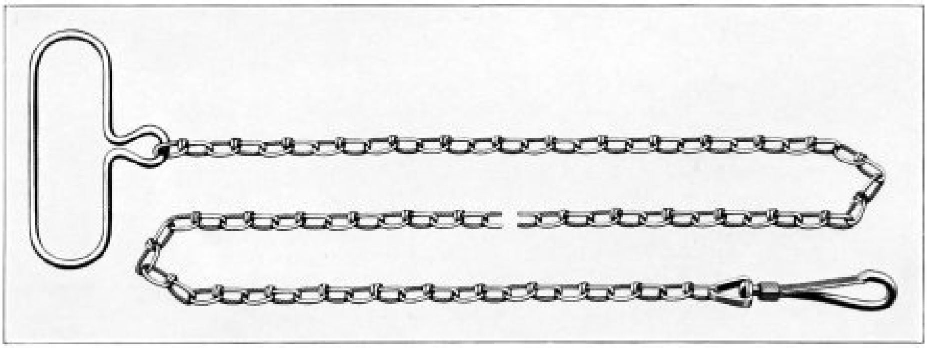
Leads for Small Dogs

Cuts below illustrate special Leads for Small Dogs, made from small sizes of chain. These are exceptionally neat Leads.

Fitted with Hand Loop and Swivel Snap. Finished in heavy Nickel Plate.



American Pattern



Tenso Pattern

American Pattern

Number	W. & M. Gauge	Length	Approximate Weight per Dozen	Quantity in Each Carton
8	...	4 feet	2 pounds	1 dozen
9 Special	...	4 feet	1¾ pounds	6 dozen

Tenso Pattern

7	18	4 feet	1¼ pounds	1 dozen
7	18	5 feet	2 pounds	1 dozen
7	18	6 feet	2¾ pounds	1 dozen

Furnished in Bright or Nickel-Plated Finish

Lock Link Pattern

Number	W. & M. Gauge	Length	Approximate Weight per Dozen	Quantity in Each Carton
7	18	4 feet	1½ pounds	1 dozen
7	18	5 feet	2½ pounds	1 dozen
7	18	6 feet	3 pounds	1 dozen

Niagara Pattern

5	16	4 feet	2 pounds	1 dozen
5	16	5 feet	2¾ pounds	1 dozen
5	16	6 feet	3½ pounds	1 dozen

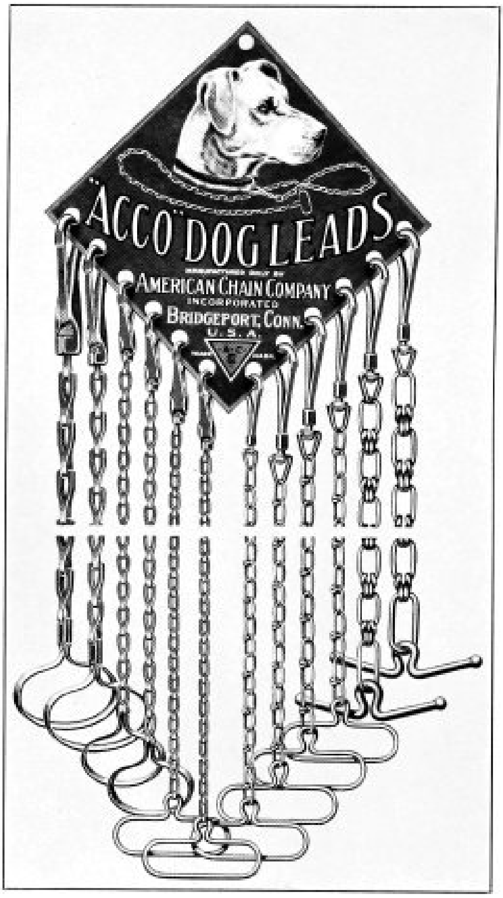
Table of Standard Wire Gauges on page 238

Dog Lead Assortments

We list below popular **Dog Lead Assortments** mounted on metal hangers. These assortments are arranged to meet all requirements.

Assortment No. 1

2	No. 6 Tenso 4 ft. Dog Leads
2	No. 5 Tenso 4 ft. Dog Leads
2	No. 4 Tenso 4 ft. Dog Leads
2	No. 9 Special American Dog Leads
2	No. 8 Special American Dog Leads
1	No. 5 American Dog Lead
1	No. 3 American Dog Lead



Assortment No. 2

2	No. 9 Special American 4 ft. Dog Leads
2	No. 8 Special American 4 ft. Dog Leads
1	No. 5 Special American 4 ft. Dog Lead
1	No. 3 Special American 4 ft. Dog Lead
1	No. 6 Tenso 4 ft. Dog Lead
1	No. 5 Tenso 4 ft. Dog Lead
2	No. 4 Tenso 4 ft. Dog Leads
1	No. 2 Lock Link 4½ ft. Dog Chain
1	No. 1 Lock Link 4½ ft. Dog Chain

Packed one assortment
in a carton

Furnished in Bright or
Nickel-Plated Finish

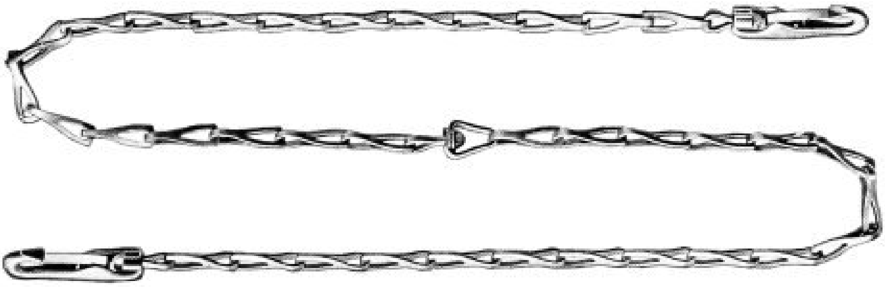
Assortment No. 3

3	No. 6 Tenso 4 ft. Dog Leads
3	No. 5 Tenso 4 ft. Dog Leads
3	No. 4 Tenso 4½ ft. Dog Chains
3	No. 2 Tenso 4½ ft. Dog Chains

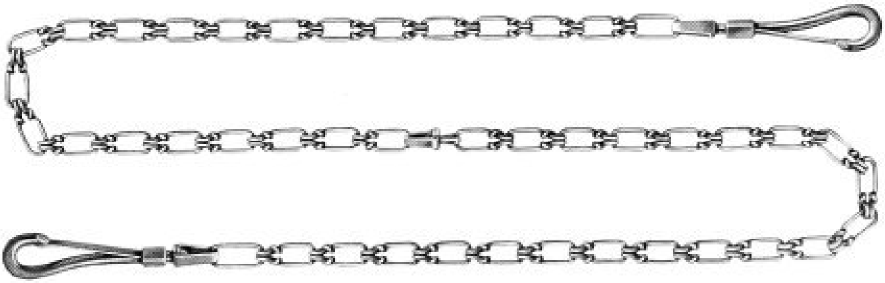
Table of Standard Wire Gauges on page 238

Kennel Chains

American Pattern



Lock Link Pattern



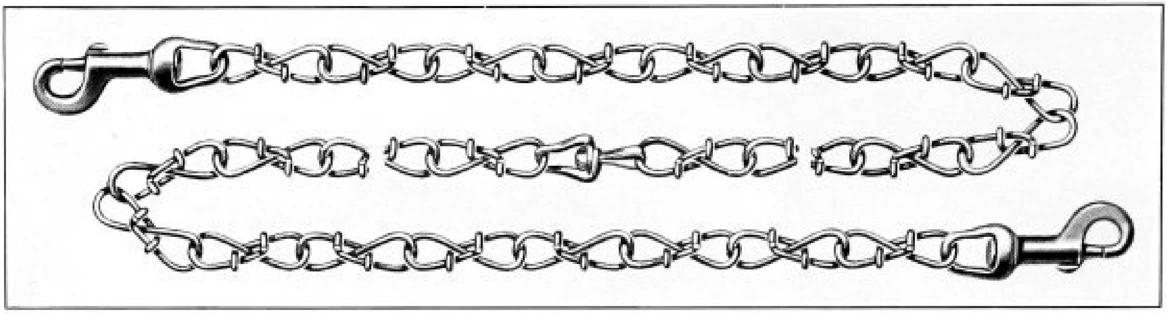
	Number	W. & M. Gauge	4½ Feet		6 Feet		9 Feet	
			Approximate Weight per Doz.	Quantity in Each Carton	Approximate Weight per Doz.	Quantity in Each Carton	Approximate Weight per Doz.	Quantity in Each Carton
American Pattern	2/0	. . .	14 pounds	½ dozen	14½ pounds	½ dozen	22½ pounds	½ dozen
	1	. . .	7¼ pounds	1 dozen	10 pounds	½ dozen	14 pounds	½ dozen
	5	. . .	4 pounds	1 dozen	5¼ pounds	1 dozen	7½ pounds	1 dozen
Tenso Pattern	1/0	11	8¼ pounds	½ dozen	11 pounds	½ dozen	16 pounds	½ dozen
	2	13	5½ pounds	1 dozen	6¾ pounds	½ dozen	10 pounds	½ dozen
	5	16	3 pounds	1 dozen	3¾ pounds	1 dozen	6½ pounds	½ dozen
Lock Link Pattern	1/0	11	11 pounds	½ dozen	14 pounds	½ dozen	19 pounds	½ dozen
	2	13	6½ pounds	1 dozen	8¼ pounds	½ dozen	11 pounds	½ dozen
	5	16	3½ pounds	1 dozen	4½ pounds	1 dozen	6¼ pounds	½ dozen
Niagara Pattern	1/0	11	11 pounds	½ dozen	13 pounds	½ dozen	18 pounds	½ dozen
	2	13	6½ pounds	1 dozen	8¼ pounds	½ dozen	11 pounds	½ dozen
	4	15	3 pounds	1 dozen	4¼ pounds	1 dozen	6 pounds	½ dozen

Furnished in Bright or Nickel-Plated Finish

Table of Standard Wire Gauges on page 238

Alaskan Kennel Chains

Niagara Pattern



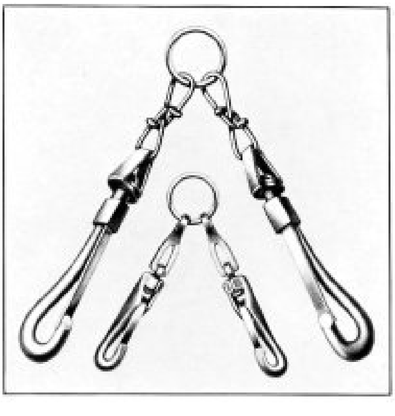
With Bolt Swivel Snap on each end and Swivel in center.
Made in sizes Nos. 3/0, 1/0, 1 and 2, 6 feet long.
Furnished in Bright or Nickel-Plated Finish.

Dog Couplers

These are used extensively on hunting and sporting dogs when led in pairs.

One snap is attached to the ring on the collar of each dog, coupling the two dogs together.

By using a dog chain or lead, as described on pages 193 to 200, attached to the ring in the center of the dog coupler, both dogs may be led with one chain.

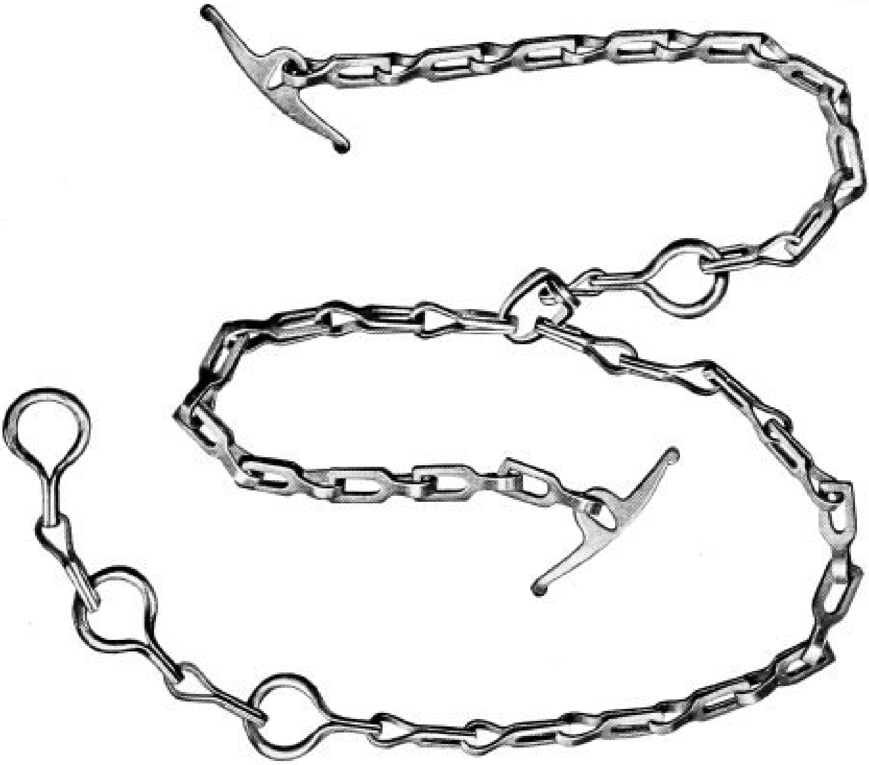


Made in Sizes No. 1 and No. 3 in Niagara, American and Lock Link Patterns

Table of Standard Wire Gauges on page 238

Cow Ties

American—*Ohio Pattern*



Number	Approximate Weight per Dozen	Quantity in Each Carton
5/0	20 pounds	½ dozen
4/0	16 pounds	½ dozen
3/0	15 pounds	½ dozen
2/0	14 pounds	½ dozen
1/0	13 pounds	½ dozen

Furnished also with Snap and Toggle

For Welded Cow Ties see pages 99 and 100

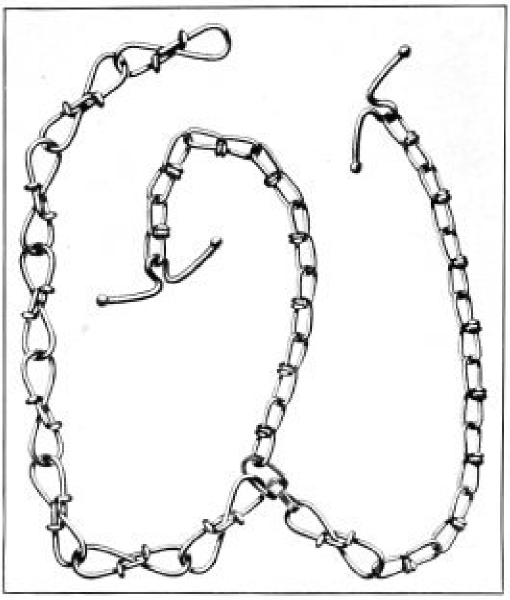
Cow Ties

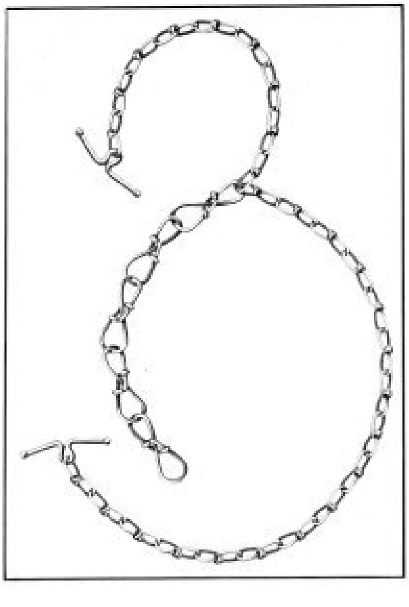
Tenso—*Ohio Pattern*

Number	Approximate Weight per Dozen	Quantity in Each Carton
5/0	24 pounds	½ dozen
4/0	20 pounds	½ dozen
3/0	18 pounds	½ dozen
2/0	16 pounds	½ dozen
1/0	13 pounds	½ dozen
1	11 pounds	½ dozen

Made also in Niagara Pattern in the above sizes.

Furnished also with Snap and Toggle.





Tenso Special—*Ohio Pattern*

This Cow Tie was designed in response to a demand for a reliable inexpensive Tie.

Made only in two sizes—2/0 and 3/0.

Packed one dozen in a strong cloth bag.

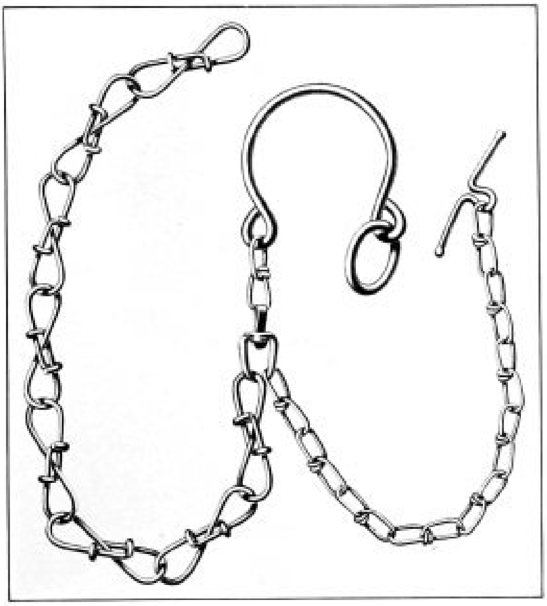
Number	Gauge	Approximate Weight per Dozen	Quantity in Each Bag
3/0	9	15 pounds	1 dozen
2/0	10	13 pounds	1 dozen

For Welded Cow Ties see pages 99 and 100

Table of Standard Wire Gauges on page 238

Cow Ties

Tenso—*Open Ring*

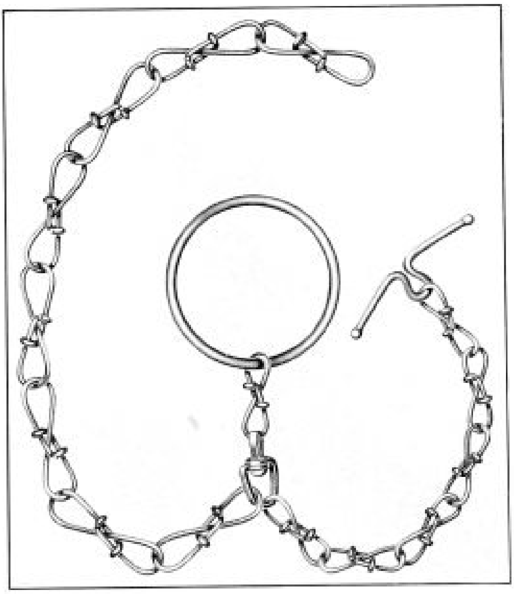


Number	Gauge	Approximate Weight per Dozen	Quantity in Each Carton
3/0	9	19 pounds	½ dozen
2/0	10	16 pounds	½ dozen

Niagara—*Closed Ring*

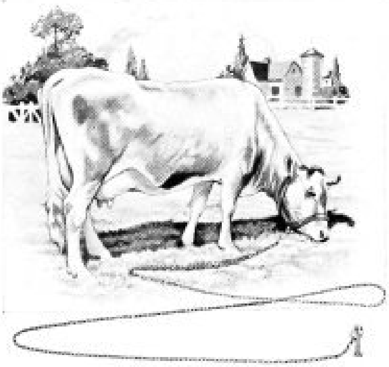
Number	Gauge	Approximate Weight per Dozen	Quantity in Each Carton
5/0	7	20 pounds	½ dozen
4/0	8	19 pounds	½ dozen
3/0	9	17 pounds	½ dozen
2/0	10	16 pounds	½ dozen
1/0	11	13 pounds	½ dozen

Furnished also with Snap



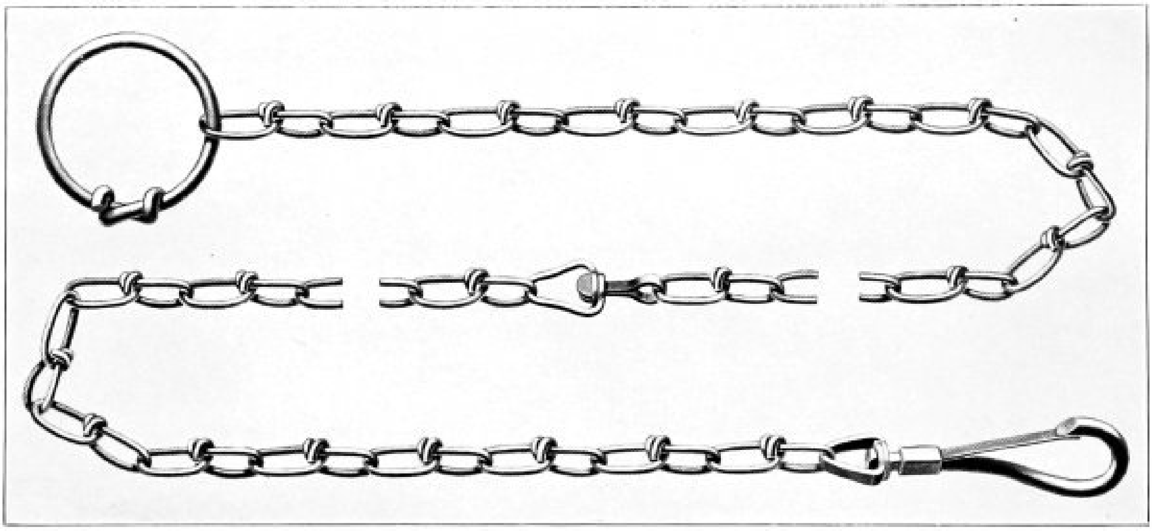
For Welded Cow Ties see pages 99 and 100

Table of Standard Wire Gauges on page 238



Tie-Out or Picket Chains

Tenso Pattern



Tenso Pattern

Number	Gauge	20 Feet		30 Feet		40 Feet		50 Feet	
		Weight per Dozen	Approximate Quantities in a Barrel	Weight per Dozen	Approximate Quantities in a Barrel	Weight per Dozen	Approximate Quantities in a Barrel	Weight per Dozen	Approximate Quantities in a Barrel
4/0	8	63 lbs.	7 doz.	92 lbs	5 doz.	121 lbs.	3 doz.	150 lbs.	2½ doz.
3/0	9	51 lbs.	8 doz.	74 lbs.	6 doz.	99 lbs.	4 doz.	121 lbs.	3 doz.
2/0	10	44 lbs.	11 doz.	64 lbs.	7 doz.	85 lbs.	5½ doz.	105 lbs.	4½ doz.
1/0	11	34 lbs.	12 doz.	49 lbs.	9 doz.	66 lbs.	6 doz.	81 lbs.	5 doz.
1	12	25 lbs.	15 doz.	37 lbs.	10 doz.	48 lbs.	7½ doz.	61 lbs.	6 doz.

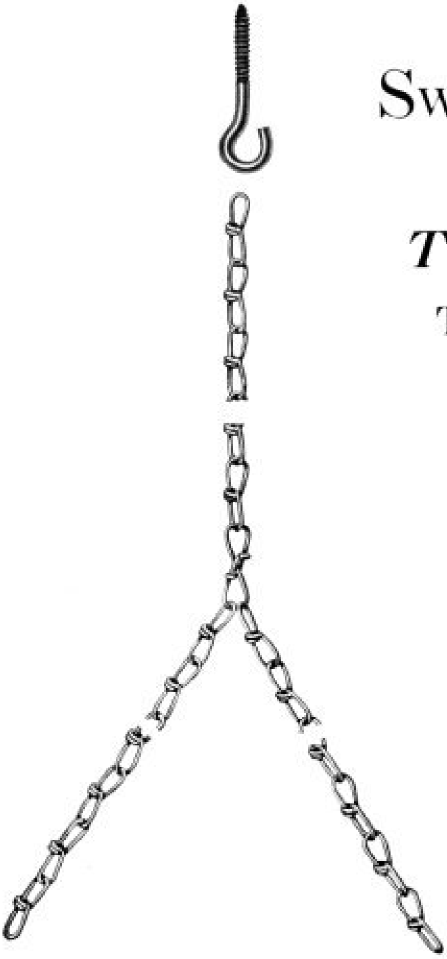
Lock Link Pattern

Number	Gauge	20 Feet Weight per Dozen	20 Feet Approximate Quantities in a Barrel	30 Feet Weight per Dozen	30 Feet Approximate Quantities in a Barrel	40 Feet Weight per Dozen	40 Feet Approximate Quantities in a Barrel	50 Feet Weight per Dozen	50 Feet Approximate Quantities in a Barrel
4/0	8	77 lbs.	7 doz.	113 lbs.	5 doz.	149 lbs.	3 doz.	187 lbs.	2½ doz.
3/0	9	63 lbs.	8 doz.	92 lbs.	6 doz.	123 lbs.	4 doz.	155 lbs.	3 doz.
2/0	10	51 lbs.	11 doz.	75 lbs.	7 doz.	98 lbs.	5½ doz.	124 lbs.	4½ doz.
1/0	11	41 lbs.	12 doz.	60 lbs.	9 doz.	80 lbs.	6 doz.	98 lbs.	5 doz.
1	12	31 lbs.	15 doz.	46 lbs.	10 doz.	60 lbs.	7½ doz.	75 lbs.	6 doz.

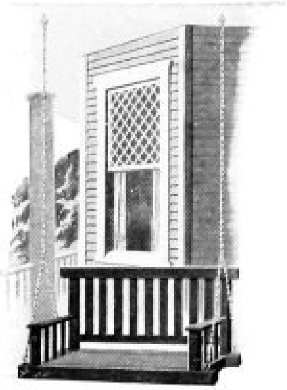
Furnished with a swivel every ten feet.

Packing: One chain in a cloth bag.

Table of Standard Wire Gauges on page 238



Porch Swing Chains
Y Type
Tenso Pattern
Two-Piece Sets



These chains are used on Porch or Swinging Settees, as shown in the illustration at the right. Illustrations show the two pieces, in Y type, Tenso Pattern.

The upper or main branch of the chain can be secured to a hook in the ceiling, while the two short or lower branches are fastened to the base or arm of the swing.

These Chains will outwear any other suspension material made. They are extremely strong, and permit of accurate and easy adjustment.

Furnished in Hot Galvanized or Cold Galvanized (S.R.P.) Finish.

Standard sizes and finishes are shown below, but any special length can be furnished on application

No. 115
"S" Hook

Y Type—With two Ceiling Hooks
"S" Hook will be furnished only when specified

Tenso Pattern, 7½ Feet

No.	5-foot Leader	Gauge	2½-foot Branches	Gauge	Approximate Weight per Dozen Sets		Quantity in Each Carton
					Hot Galvanized	S. R. P. Finish	
403	4/0	8	3/0	9	66 pounds	60 pounds	1 set
302	3/0	9	2/0	10	57 pounds	51 pounds	1 set
202	2/0	10	2/0	10	51 pounds	45 pounds	1 set
201	2/0	10	1/0	11	47 pounds	41 pounds	1 set

Tenso Pattern, 8 Feet

No.	5-foot Leader	Gauge	3-foot Branches	Gauge	Approximate Weight per Dozen Sets		Quantity in Each Carton
					Hot Galvanized	S. R. P. Finish	
4033	4/0	8	3/0	9	69 pounds	63 pounds	1 set
3023	3/0	9	2/0	10	60 pounds	54 pounds	1 set
2023	2/0	10	2/0	10	54 pounds	48 pounds	1 set
2013	2/0	10	1/0	11	50 pounds	44 pounds	1 set

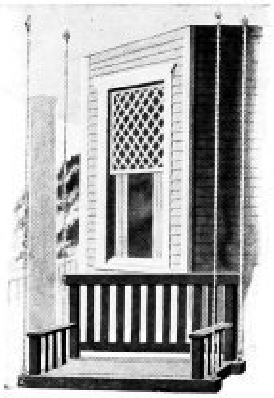
Table of Standard Wire Gauges on page 238

Porch Swing Chains

Tenso Pattern

Four-Piece Sets

With four Ceiling Hooks



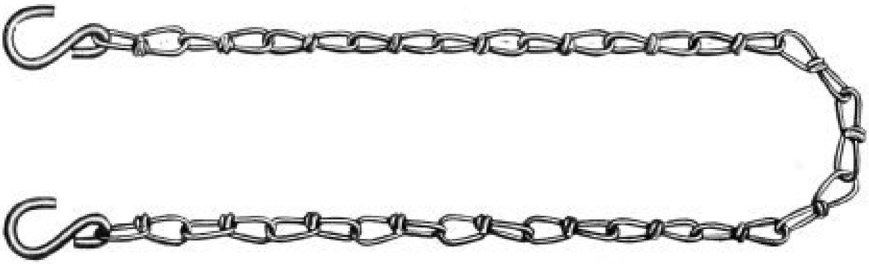
Tenso Pattern, 7½ *Feet*

No.	Size	Gauge	Approximate Weight per Dozen Sets		Quantity in Each Carton
			Hot Galvanized	S. R. P. Finish	
407	4/0	8	109 lbs.	99 lbs.	1 set
307	3/0	9	98 lbs.	89 lbs.	1 set
207	2/0	10	87 lbs.	77 lbs.	1 set

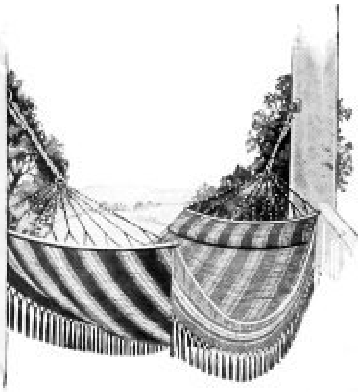
Tenso Pattern, 8 *Feet*

408	4/0	8	118 lbs.	110 lbs.	1 set
308	3/0	9	101 lbs.	92 lbs.	1 set
208	2/0	10	90 lbs.	80 lbs.	1 set

Hammock Chains



Tenso Pattern



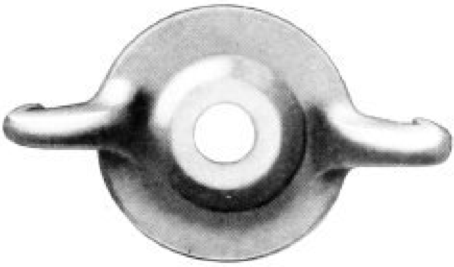
No.	Size	Gauge	Length	Approximate Weight per Dozen Sets		Quantity in Each Carton
				Hot Galvanized	S. R. P. Finish	
203	2/0	10	3 feet	16 pounds	16 pounds	1 set
206	2/0	10	6 feet	29 pounds	28 pounds	1 set
209	2/0	10	9 feet	43 pounds	41 pounds	1 set

Also furnished in Niagara Pattern

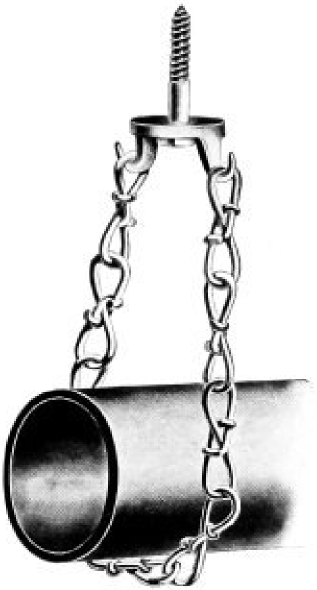
Table of Standard Wire Gauges on page 238

Pipe-Hanging Chain

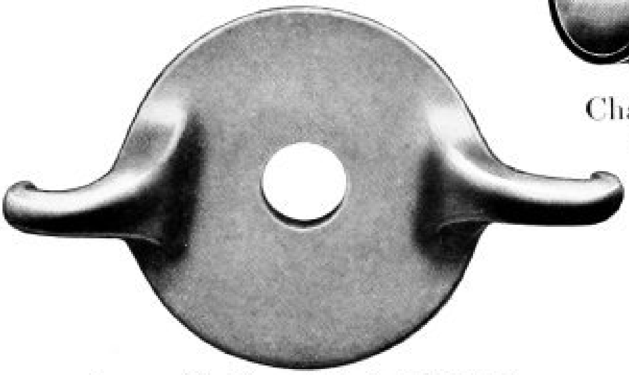
Niagara Pattern



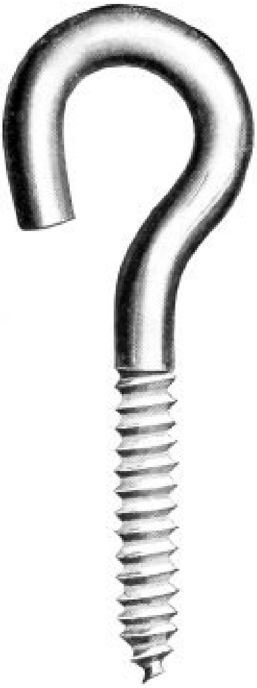
Small Ox Bow Chain Hanger



Chain and Hanger in Position



Large Ox Bow Chain Hanger



Screw Hook Hanger

Pipe-Hanging Chain—Niagara Pattern

Size of Chain	Gauge	For Pipe	Tensile Strength
No. 3/0	9	3½ inches to 8 inches	1675 pounds
No. 1/0	11	2½ inches to 3 inches	1130 pounds
No. 2	13	1½ inches to 2 inches	690 pounds
No. 3	14	1 inch to 1¼ inches	505 pounds

Ox Bow Hangers

No.	Size	For Use With
3/0	Large	Nos. 3/0 and 1/0 Chain
2	Small	Nos. 2 and 3 Chain

Small Ox Bows packed 100 pieces in a carton
Large Ox Bows packed 50 pieces in a carton

Screw Hook Hangers

No.	Size	For Use With
3/0	Large	Nos. 3/0, 1/0 and 2 Chain
2	Small	No. 3 Chain

Small Screw Hooks packed 100 pieces in a carton
Large Screw Hooks packed 50 pieces in a carton

Table of Standard Wire Gauges on page 238

American Arc Lamp Chain

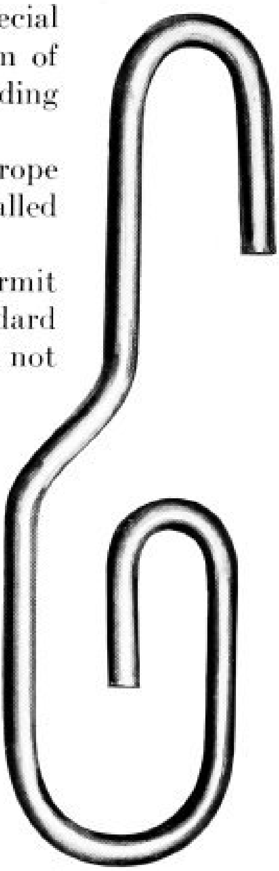
American Arc Lamp Chain, with our special attachments, is superior to any other form of suspension material made for use in suspending arc and incandescent lights.

American Arc Lamp Chain will outwear rope many times over and is more easily installed and operated than any other material.

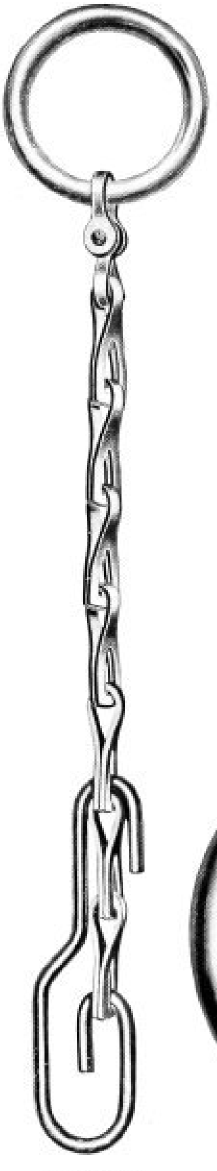
The links, being flat and free of action, permit the chain to run smoothly over any standard mast-arm pulley. Ice, snow or sleet does not interfere with its ease of operation.

The chain and attachments are hot galvanized.

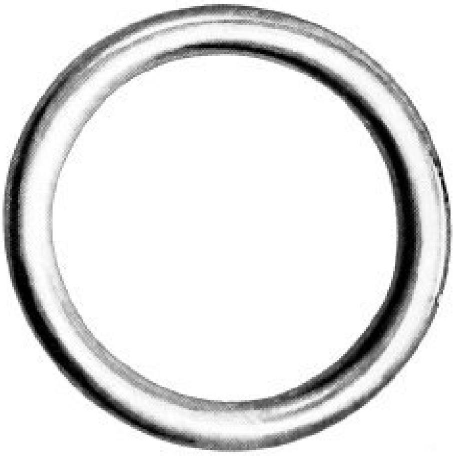
Illustrations show the attachments used with the various sizes of chain. The Arc Lamp Hook is for connecting the lamp to chain, while the Connecting Links are used to attach the ring to the pole end of chain.



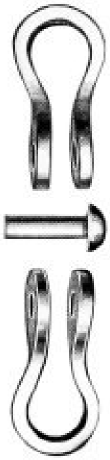
Arc Lamp Hook



American
Arc Lamp Chain
with Attachments



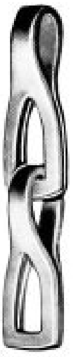
Arc Lamp Ring



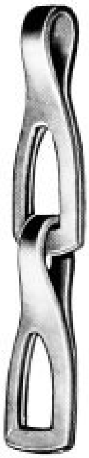
Arc Lamp Clevis
Connecting Links

Number		Tensile Strength	Approximate Weight per 1000 Feet
31	American Galvanized Chain	915 pounds	118 pounds
33	American Galvanized Chain	725 pounds	89 pounds
35	American Galvanized Chain	550 pounds	71 pounds

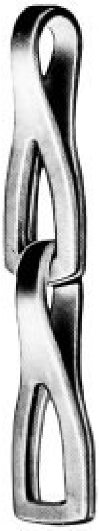
Arc Lamp Hooks, Rings and Connecting Links are furnished in sizes to correspond with size of chain.



No. 35



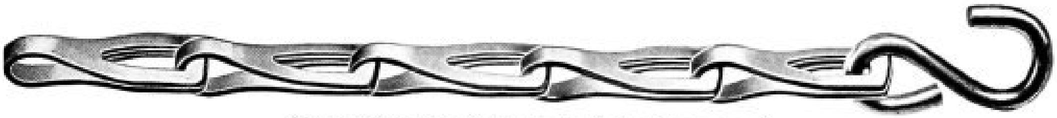
No. 33



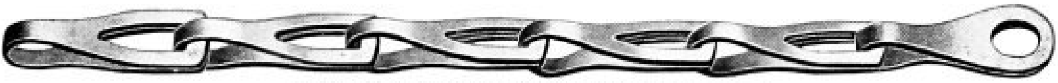
No. 31

Seal Pin Chains

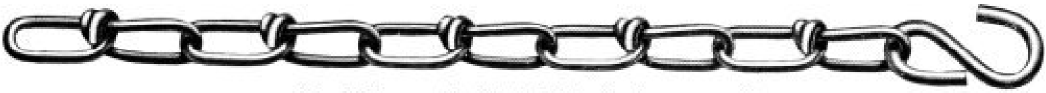
These chains are used for securing the seal pin on lockers, battery containers and box-car doors to prevent the loss of the pin when not in place.



No. 3 American with Hook, 7¾ inches long over all



No. 3 American with Eye, 7¾ inches long over all



No. 1 Tenso with Hook, 7¾ inches long over all

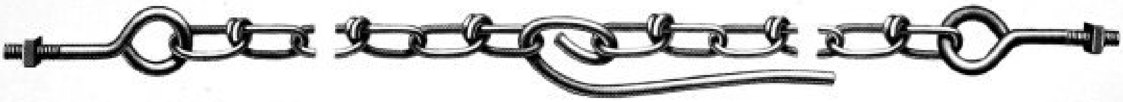
Furnished in Bright or Hot Galvanized Finish, in bulk only.

Anti-Spreader Chains

Tenso Pattern

Anti-Spreader Chains are used on wagons to prevent spreading of the wagon box when heavily loaded. Fitted with a strong, threaded eyebolt, and a nut on the end for securing it to the opposite sides of the wagon box, and with a lock tongue in the center for adjustment. Unless otherwise specified, eyebolts on these chains will be furnished 1½ inches long, measured under the eye.

Special eyebolts up to 3 inches long can be furnished.



Made in the following sizes:

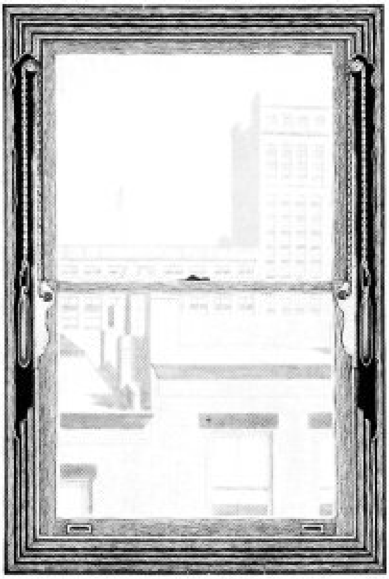
No. 4/0	38-inch	No. 2/0	38-inch
No. 4/0	42-inch	No. 2/0	42-inch

Length includes eyes of bolts

See Welded Anti-Spreader Chains on page 71

Table of Standard Wire Gauges on page 238

American Sash Chain—Steel



SASH CHAIN is used on vertically sliding windows as a means of suspending the sash in the window frames, permitting them to be raised or lowered to any position desired.

The chain is operated over pulleys assembled in the window frame and attached to counterbalancing weights on the inside of the window casing.

Window sashes of this type are always double hung, that is, suspended from each side.

Our Sash Fixtures permit of quick and easy adjustment. The "U" Piece and Ring are for attaching the chain to the side of the sash, while the Weight Hooks are used to connect the counterbalancing weight to the other end of chain. (See illustration on this page.)

This Sash Chain is made from the best steel obtainable for this purpose, blanked and assembled on special machines, insuring uniformity of construction and strength.

Links being flat, the chain has a strap-like action, runs smoothly and freely over the pulleys, and will not kink.

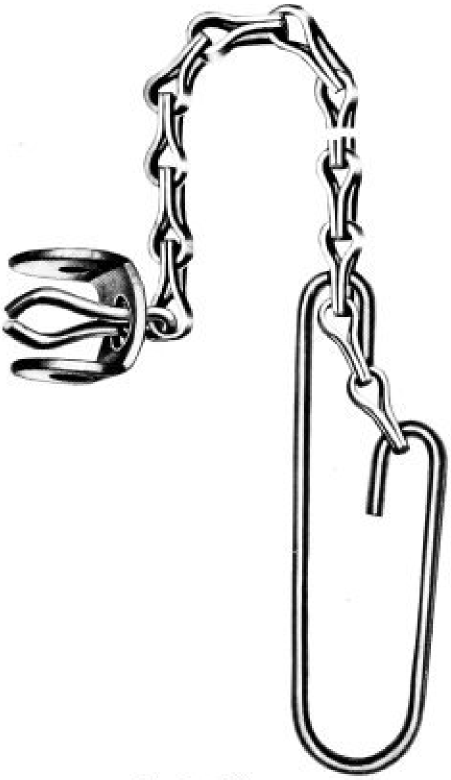
American Steel Sash Chain represents the maximum in strength and wearing qualities. It will outwear any other type of sash suspension material, and always sustains its load.

Fire Precaution: American Steel Sash Chain is practically indispensable for use in fireproof buildings. It will maintain its position in a fire long after rope, cord or other materials become useless, thus keeping windows closed, preventing draughts and the rapid spread of a conflagration.

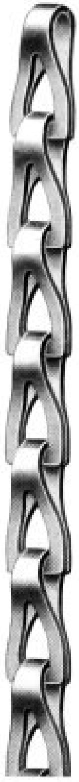
Guarantee: We guarantee any size of American Sash Chain not to fail in service when carrying the weights of sash as prescribed on the following page, and when properly installed. We will replace any material that does not meet with this guarantee.

Finishes: The various finishes in which this chain is furnished are described on page 216.

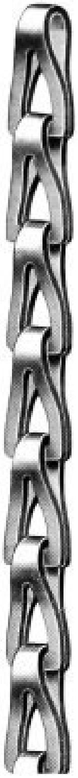
American Sash Chain—Steel



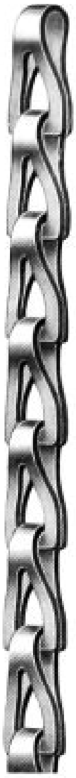
Sash Fixtures
Coppered Finish Only



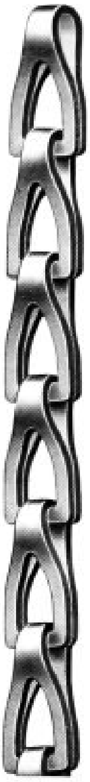
No. 80



No. 100



No. 130



No. 250

We have standardized the size of chain to correspond with the weight of sash for which it is intended.

	Approximate weight per 500-foot reel Pounds
No. 80, for 80-pound double-hung Sash	30
No. 100, for 100-pound double-hung Sash	40
No. 130, for 130-pound double-hung Sash	45
No. 250, for 250-pound double-hung Sash	59

Furnished also in solid bronze.

Fixtures: Coppered finish only: Packed 25 sets in carton. One set consists of four weight hooks, four sash rings and four U pieces (sufficient for two double-hung sashes). Weight per carton of 25 sets, 8 pounds.

Packing: Standard method is 500 feet on a reel.

American Sash Chain Finishes

Bright: Tumbled to a bright or highly polished finish. It is not rust-proof.

Coppered: This finish is obtained by an acid copper dip. It is not rust-proof.

S. R. P. (Special Rust-Proof): The S. R. P. finish is an actual deposit of zinc, put on by our special electro process. We do not guarantee it to be absolutely rust-proof, but it is an excellent rust preventive.

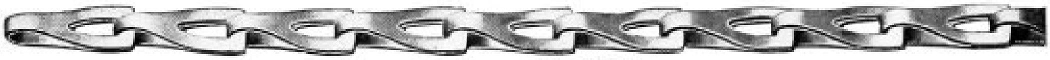
Hot Galvanized: This finish is obtained by immersing the chain in a hot bath of spelter. Our method of treatment leaves the chain evenly coated, bright and smooth, and the links clean of all surplus spelter, so that they work freely. It is rust-proof.

Hercules Finish: This is the same as Hot Galvanized except that it is given a coat of copper over the galvanizing. The copper finish is desirable in many instances to match the interior trim of a window. It is rust-proof.

Guarantee

We positively guarantee all American Sash Chain, Hot Galvanized or Hercules finish, to be absolutely rust-proof, and will replace any such chain that fails to meet this guarantee.

Acco Round Cord Pulley Chain



Cut shows chain full size

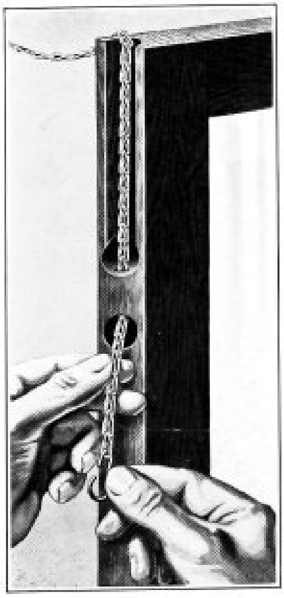
This Chain takes the place of Cord for use over the ordinary round grooved Sash Cord Pulley.

Acco Round Cord Pulley Chain works freely and noiselessly, and its operation is not affected by atmospheric conditions. It will not kink. Economical, strong, durable, and easily installed.

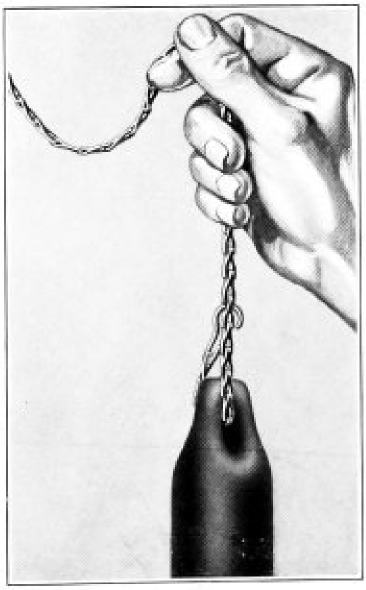
Furnished in A. C. D. (Coppered Steel), S. R. P. (Special Rust-Proof), or Hot Galvanized Finish.

Packed in strong cloth bags containing 100 feet of chain with 40 weight fixtures in each bag.

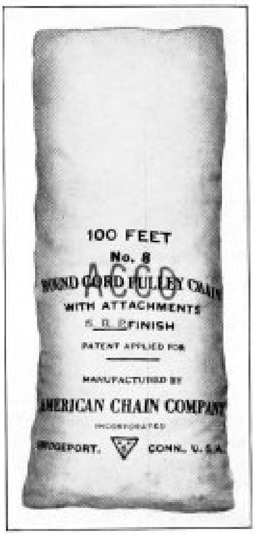
Weight approximately 3½ pounds per bag.



Cut shows how the Fixture (hook) is used for installing chain in sash.



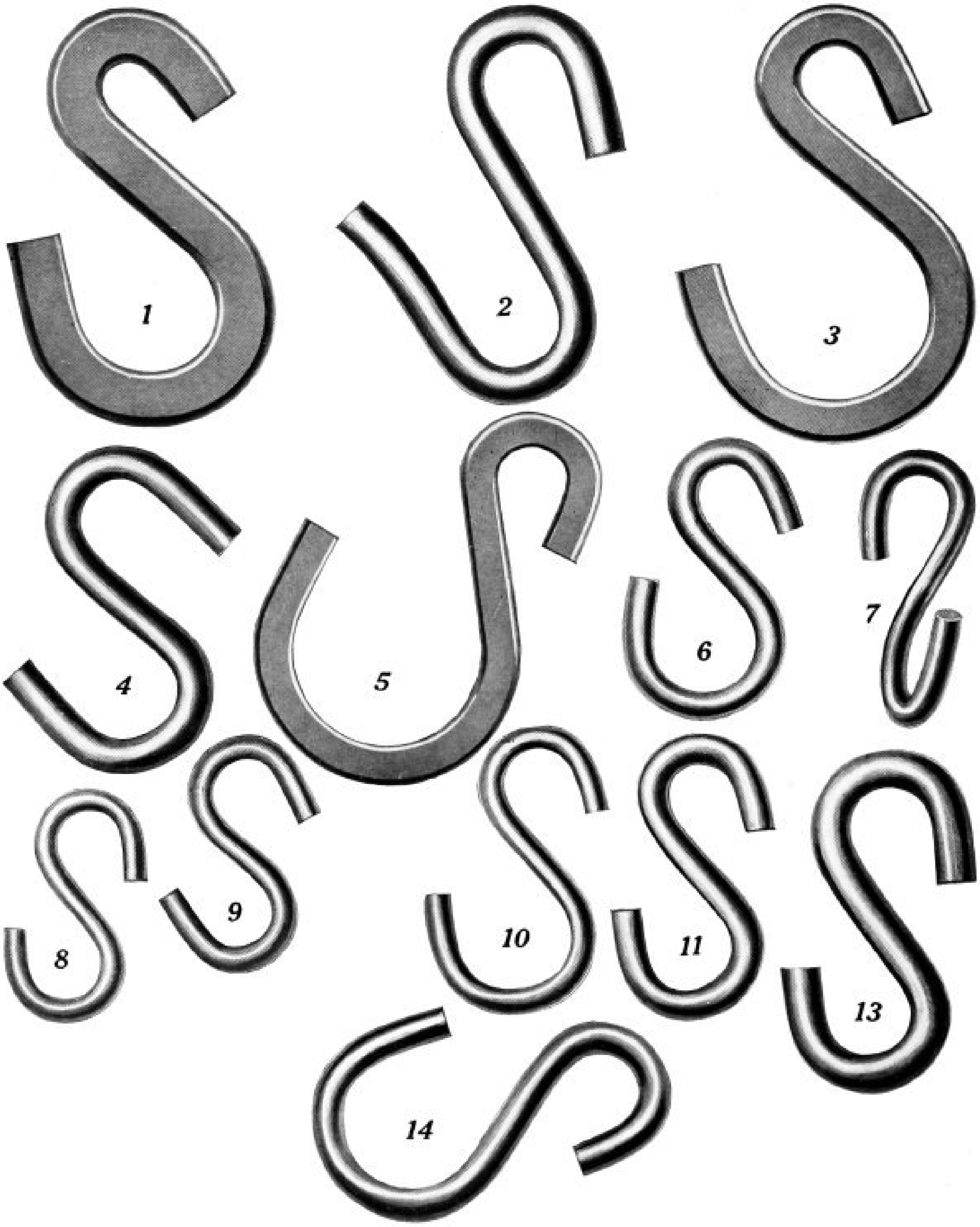
Cut shows how the Fixture (hook) is used for fastening chain to weights.



Cut shows bag containing 100 feet of chain with attachments.

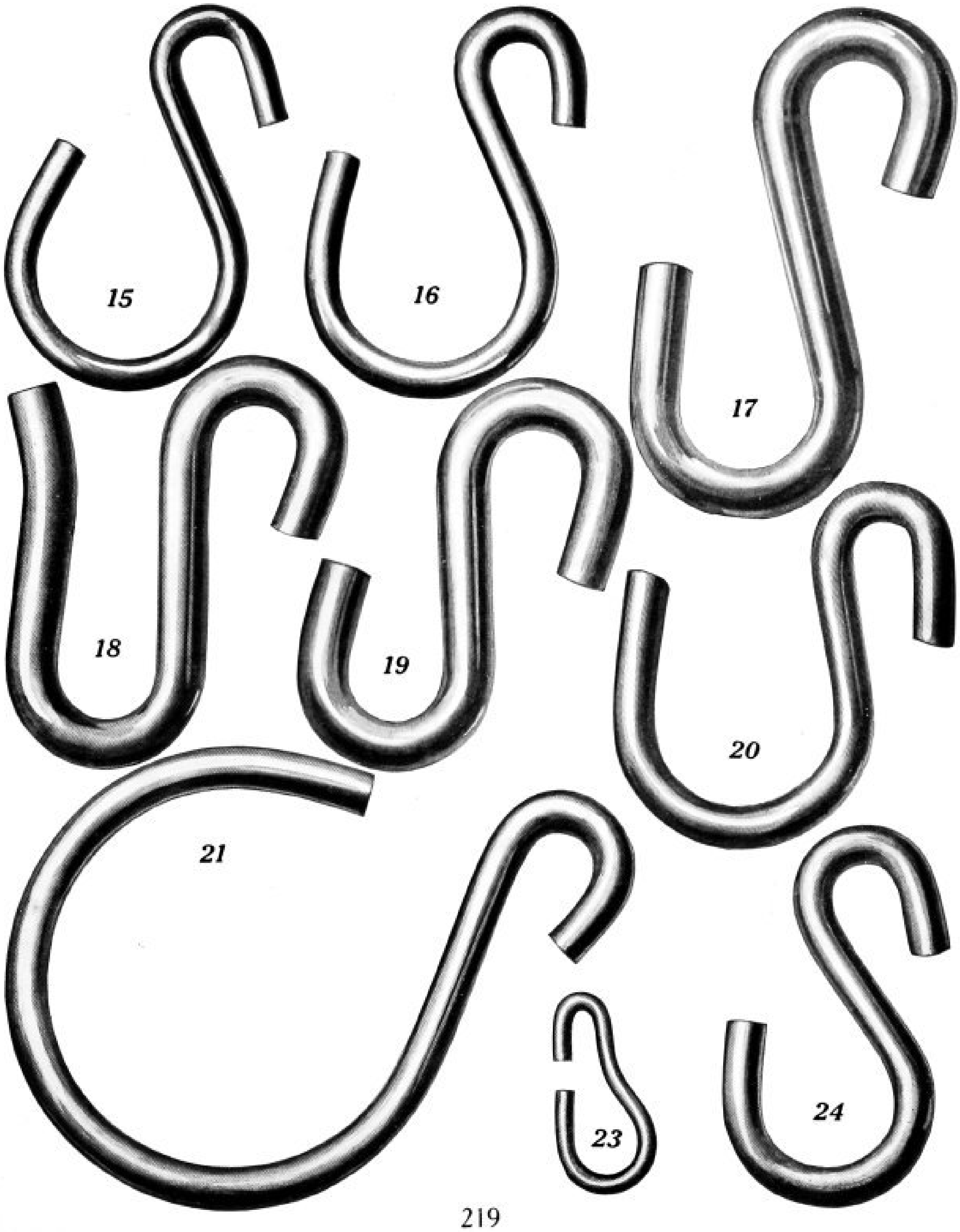
S-Hooks

Illustrations are full size



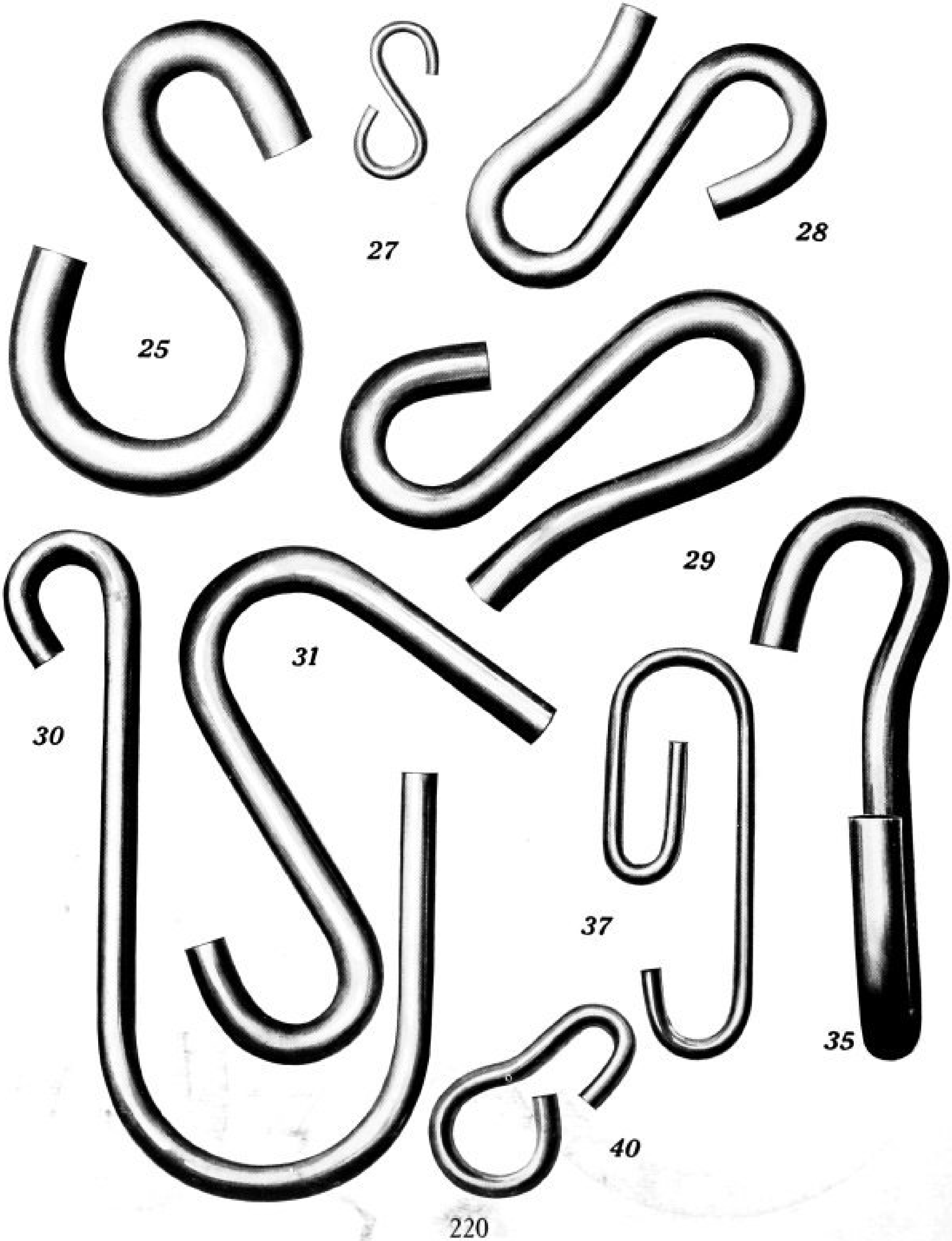
S-Hooks

Illustrations are full size



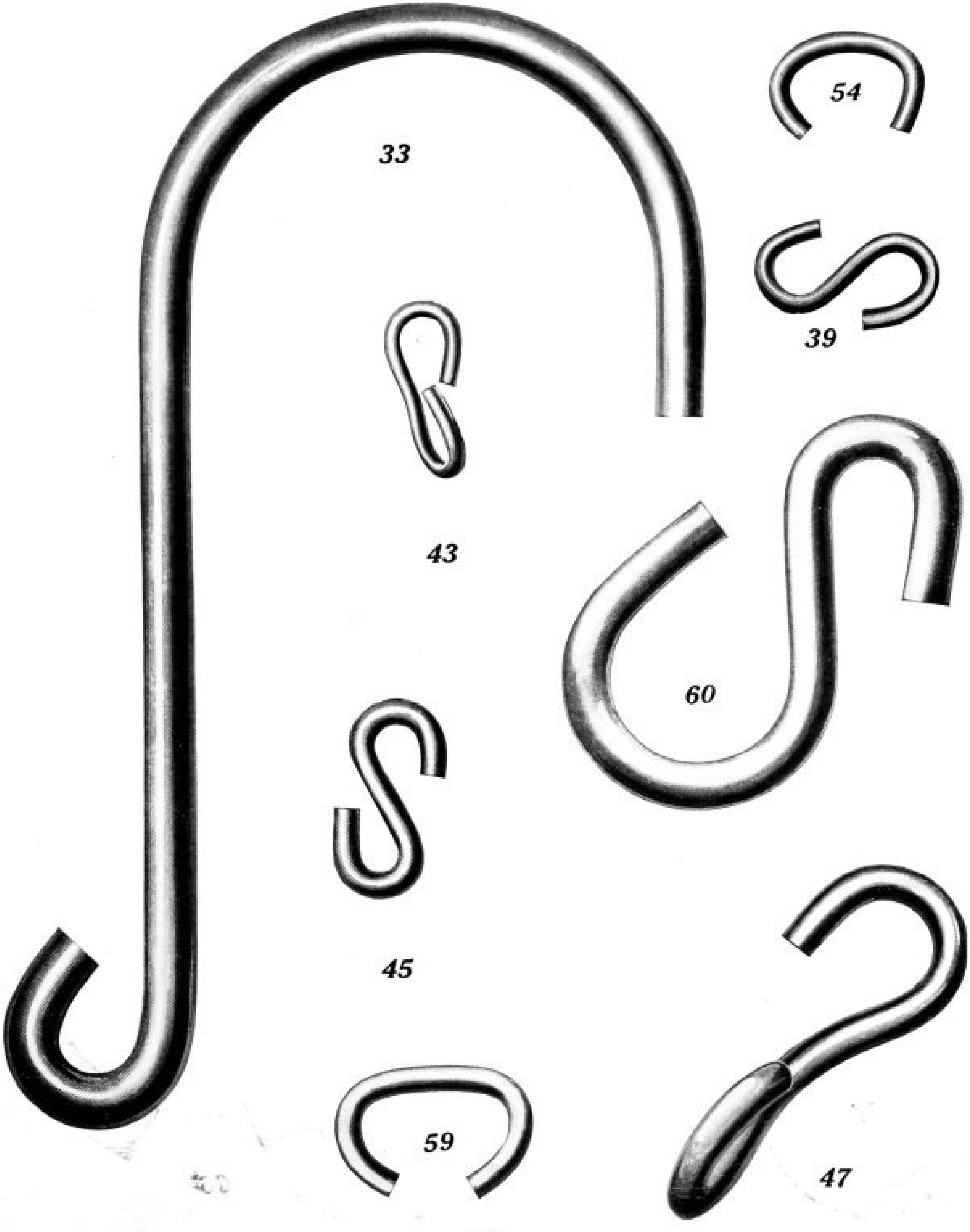
S-Hooks

Illustrations are full size



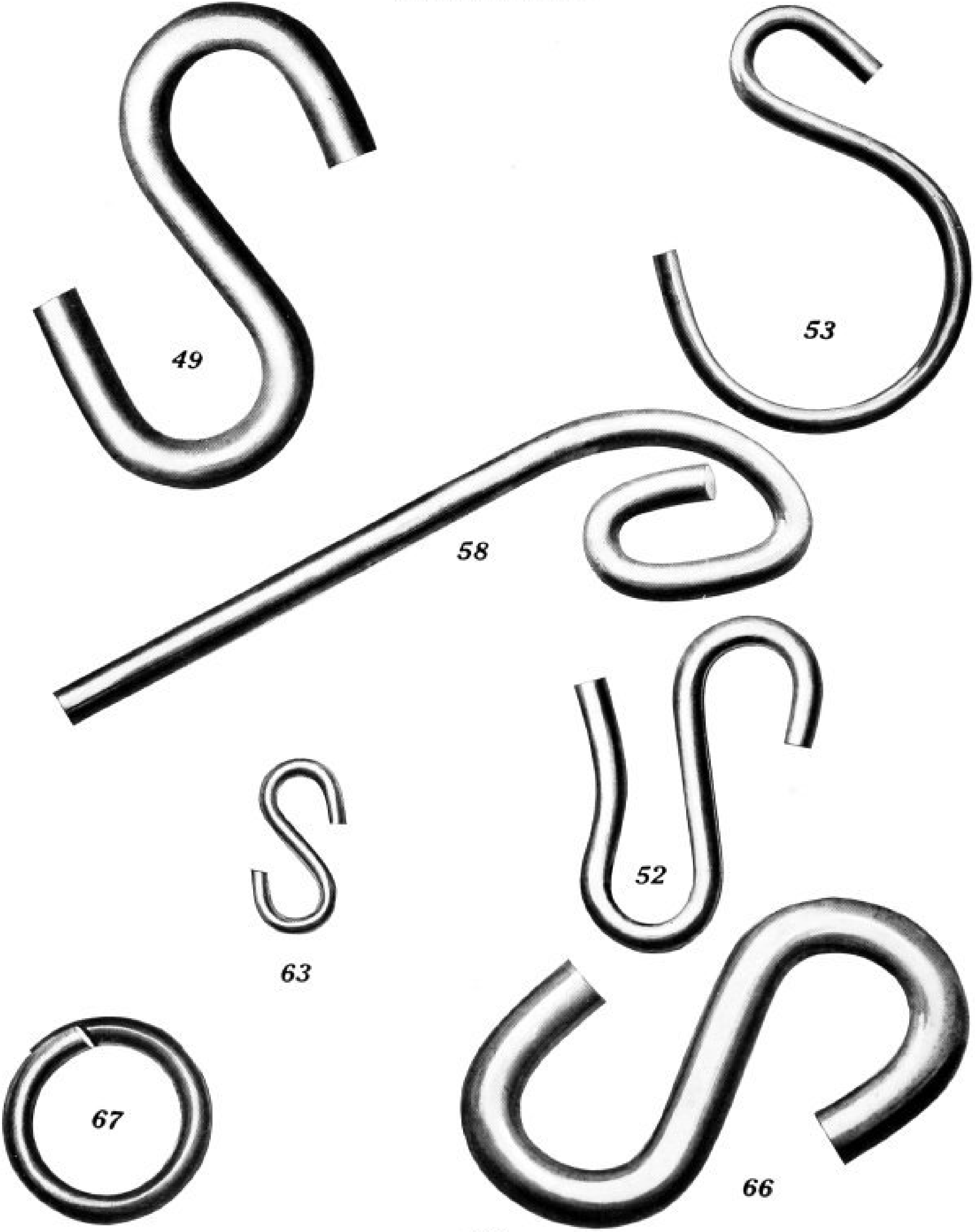
S-Hooks

Illustrations are full size



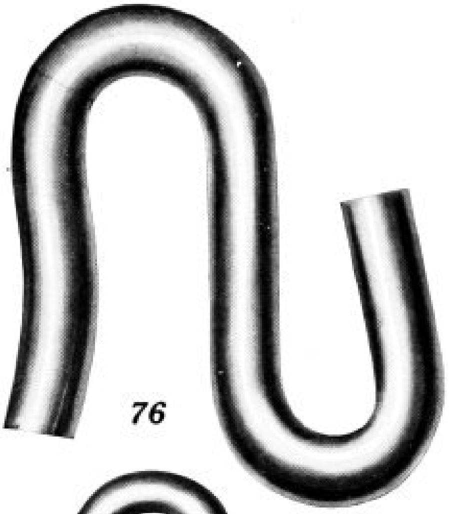
S-Hooks

Illustrations are full size

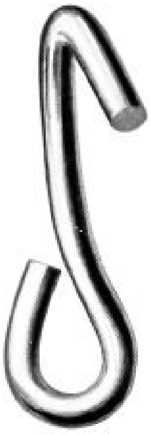


S-Hooks

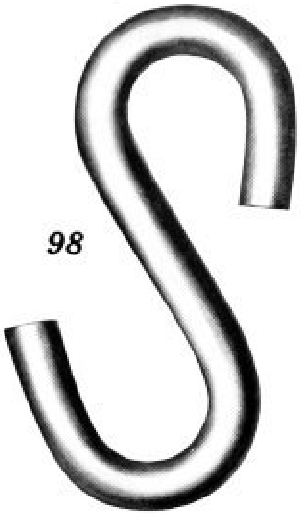
Illustrations are full size



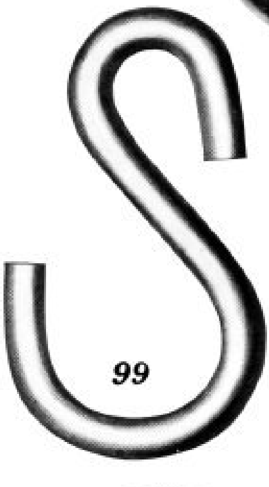
76



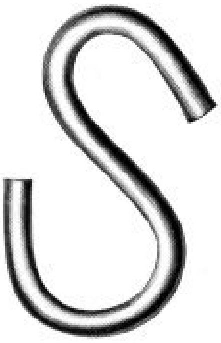
90



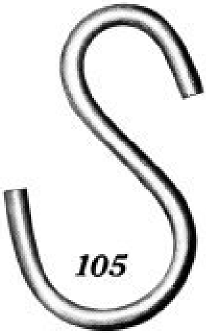
98



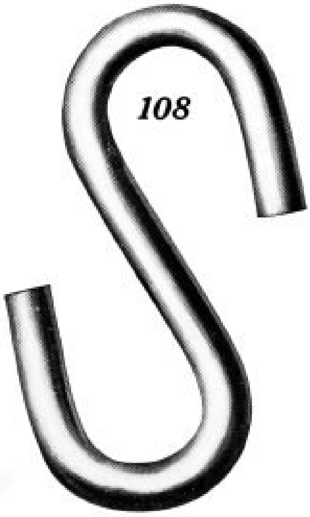
99



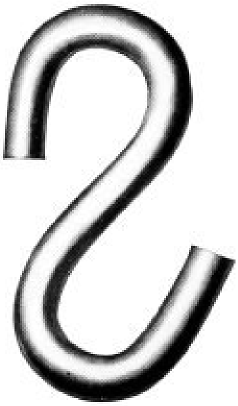
103



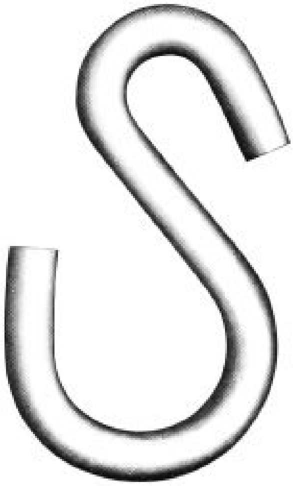
105



108



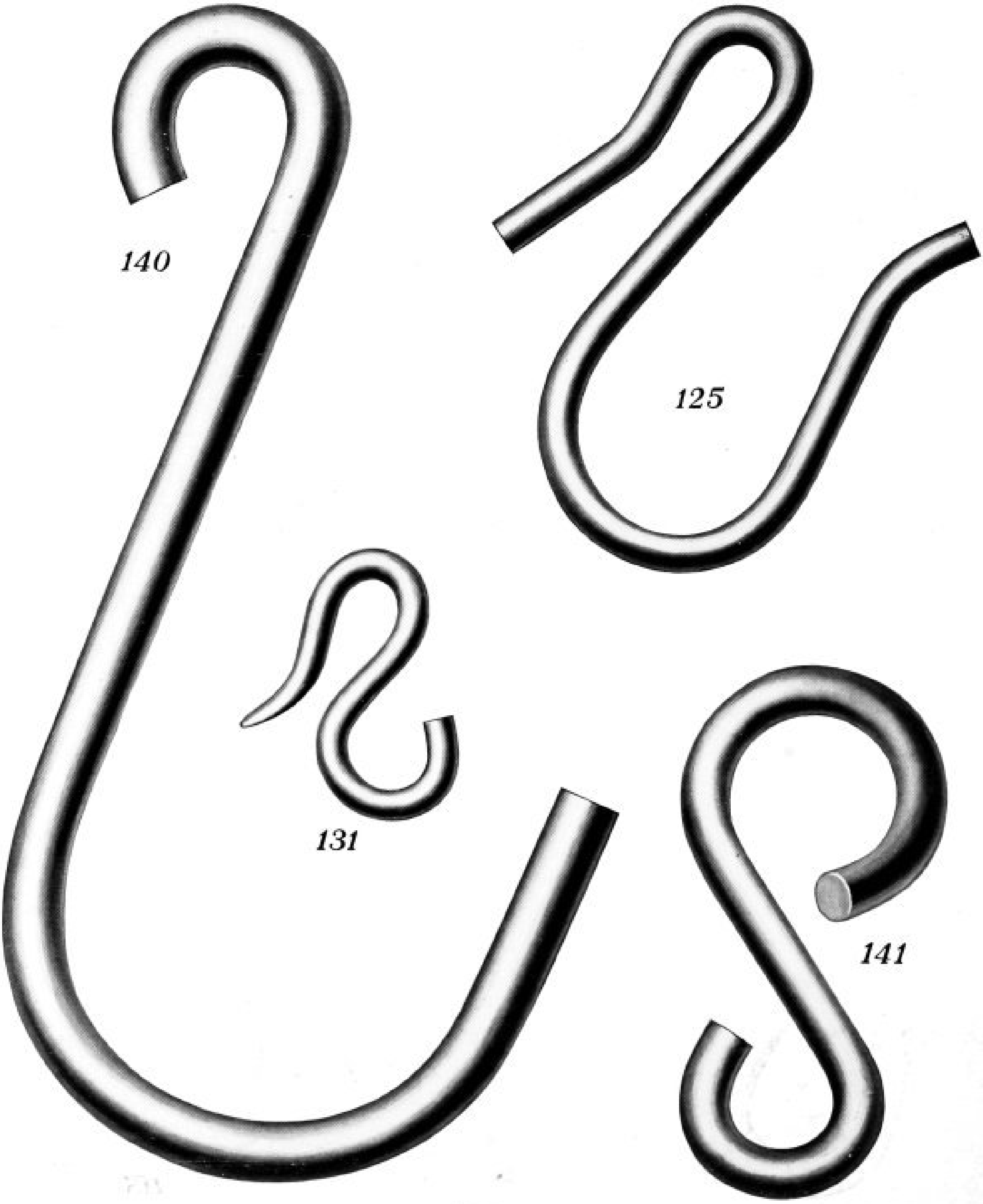
110



115

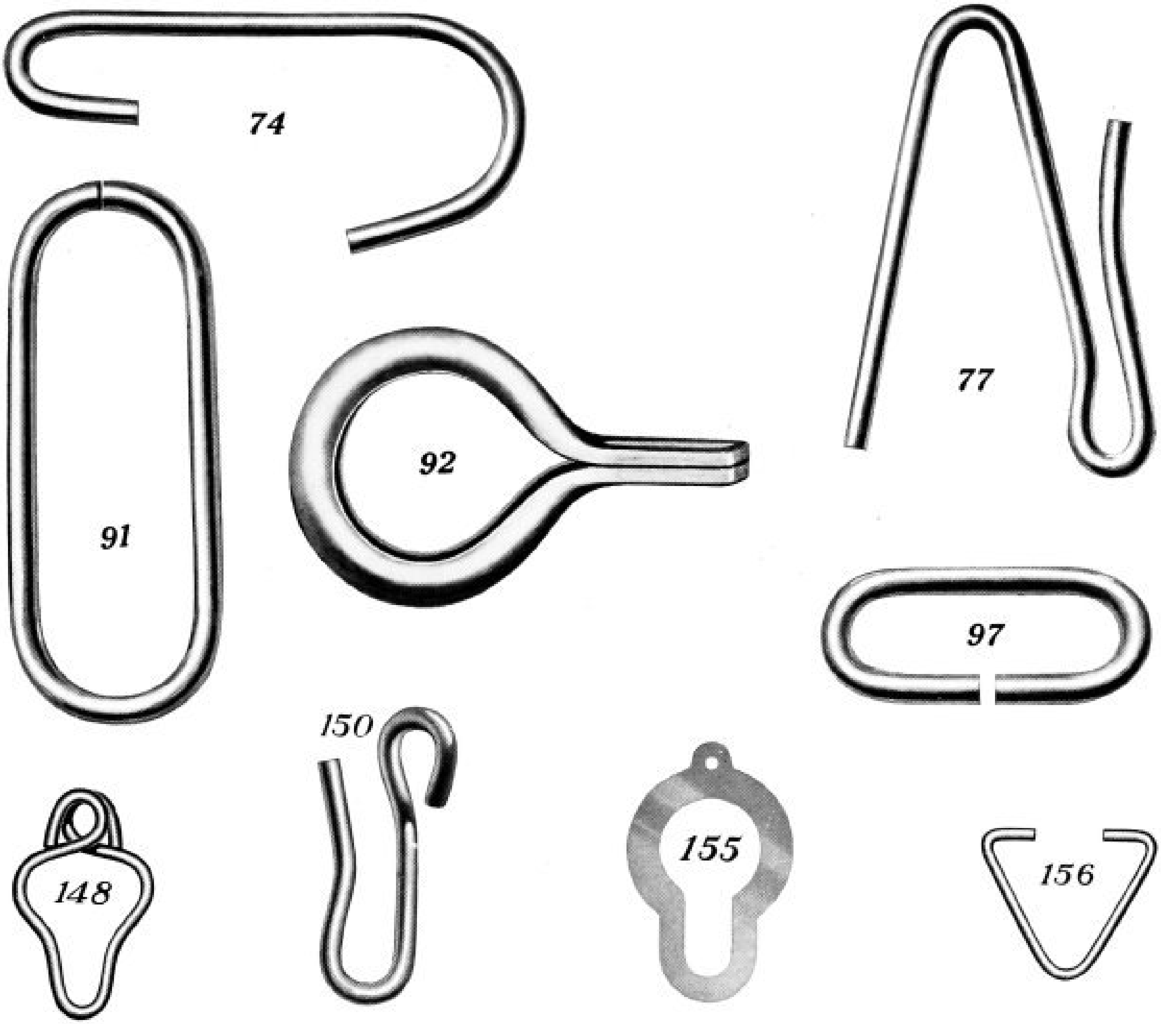
S-Hooks

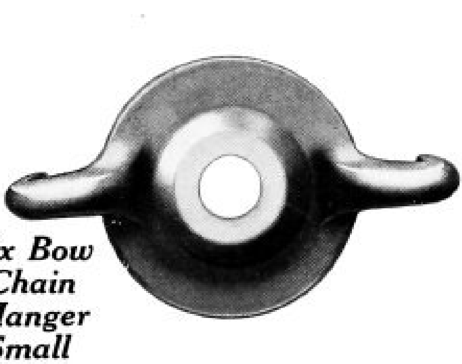
Illustrations are full size

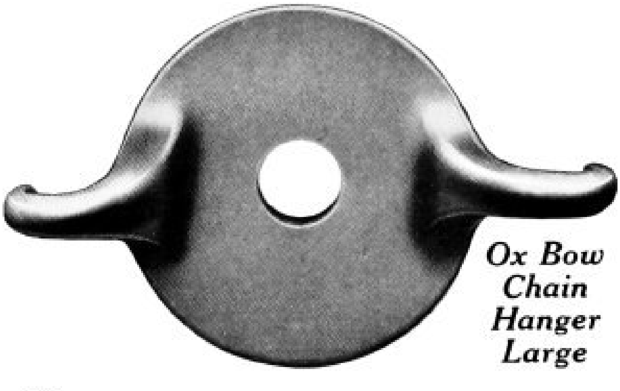


Special Attachments

Illustrations are full size

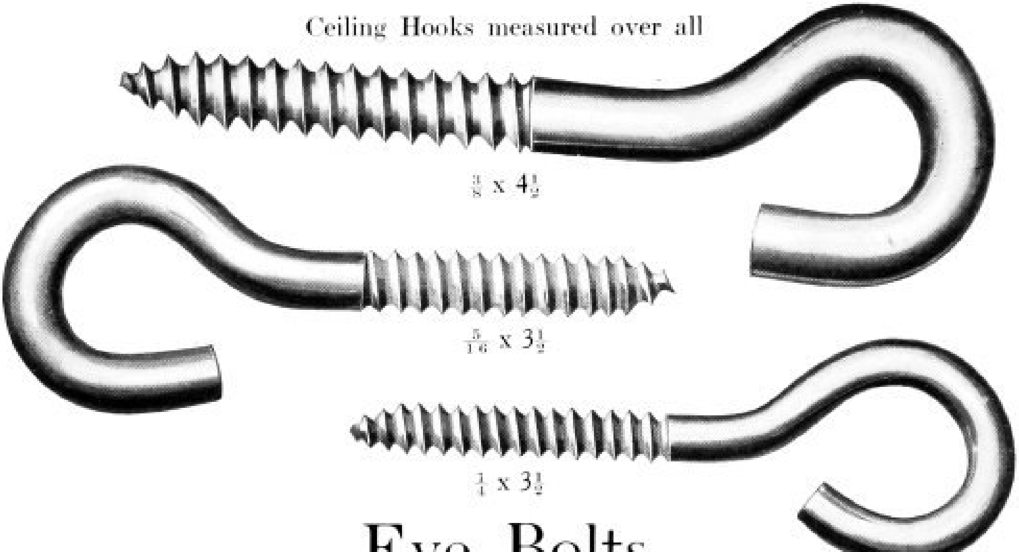



Ox Bow Chain Hanger Small


Ox Bow Chain Hanger Large

Ceiling Hooks

Ceiling Hooks measured over all



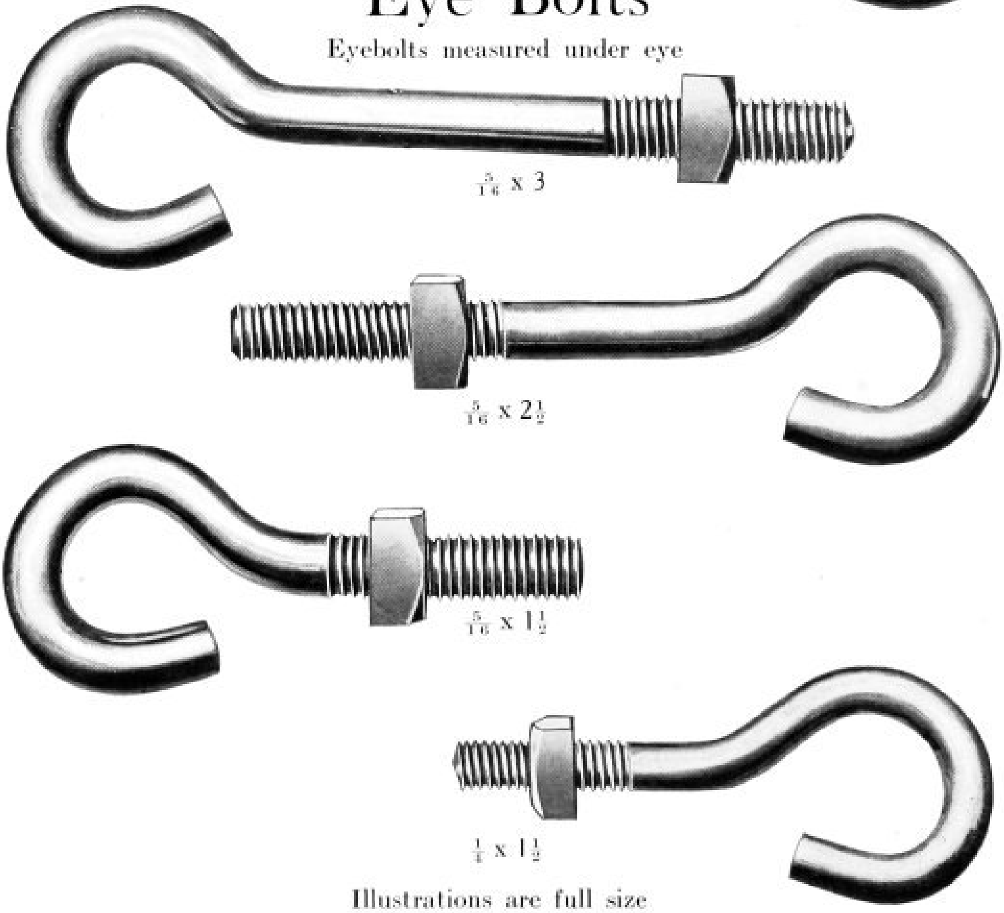
$\frac{3}{8}$ x $4\frac{1}{2}$

$\frac{5}{16}$ x $3\frac{1}{2}$

$\frac{1}{4}$ x $3\frac{1}{2}$

Eye Bolts

Eyebolts measured under eye



$\frac{5}{16}$ x 3

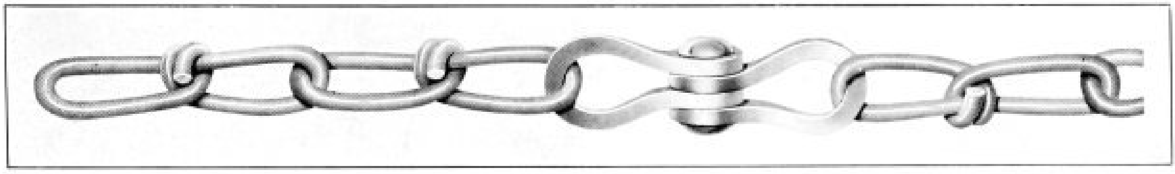
$\frac{5}{16}$ x $2\frac{1}{2}$

$\frac{5}{16}$ x $1\frac{1}{2}$

$\frac{1}{4}$ x $1\frac{1}{2}$

Illustrations are full size

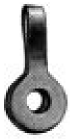
Clevis Repair Links



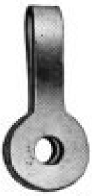
Clevis Repair Links afford a convenient and economical means of repairing or joining together Weldless Chain, as shown by the above illustration. Two Clevises and a rivet comprise a set.

Made in the following sizes.

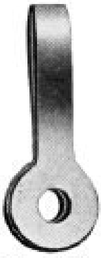
Illustrations are full size



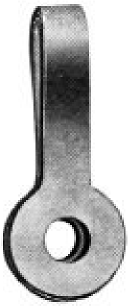
No. 5



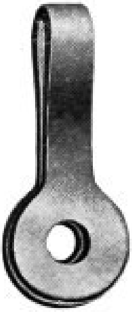
No. 1



No. 2/0

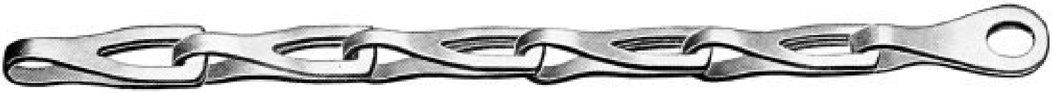


No. 3/0



No. 5/0

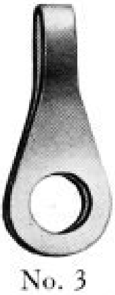
Round Eyes



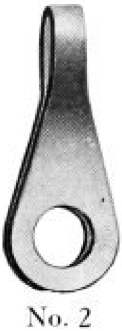
Round Eyes are used for various purposes, chiefly as an end on Weldless Chain, where it is impossible to use the eye of the chain.

Made in the following sizes.

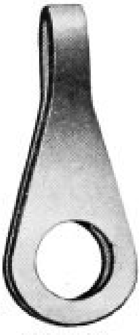
Illustrations are full size



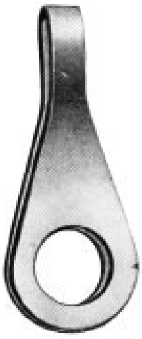
No. 3



No. 2



No. 1/0



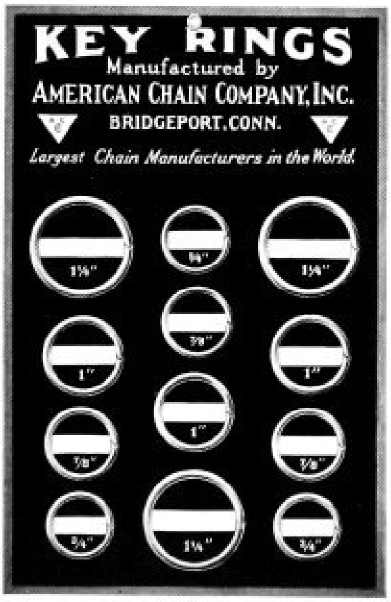
No. 4/0

Acco Key Rings

Made from specially drawn steel, tempered, hardened and heavily Nickel-Plated. Made in sizes from ⅝ inch to 1¾ inches as illustrated.

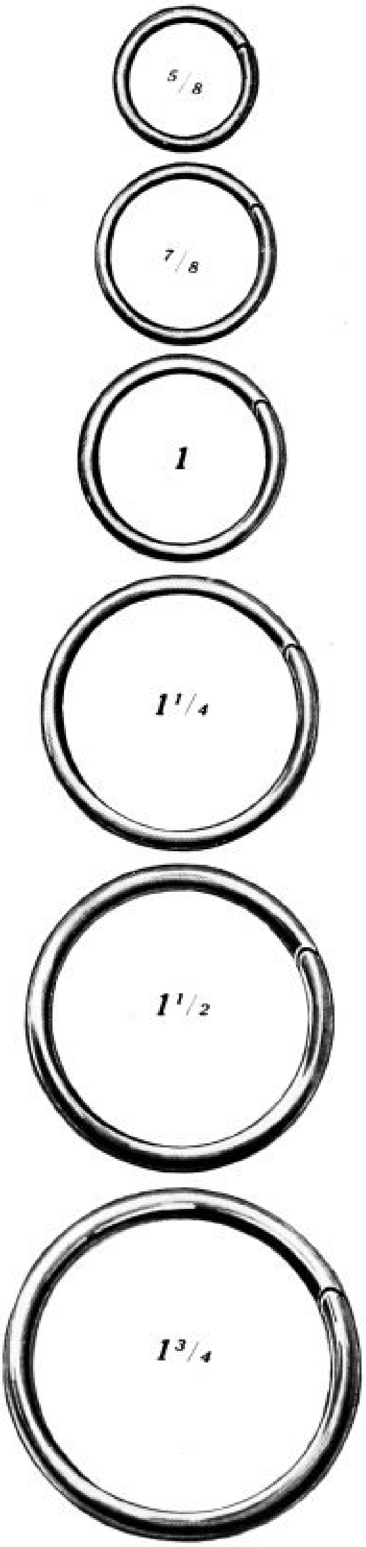
Packed one gross to a carton or on display cards of one dozen assorted sizes.

Sizes specified indicate inside diameter in inches.

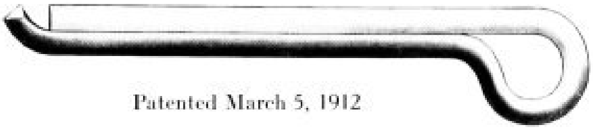

KEY RINGS
Manufactured by
AMERICAN CHAIN COMPANY, INC.
BRIDGEPORT, CONN.
Largest Chain Manufacturers in the World.
1"
1"
1"

(Patent covering Display Card Pending)

Miniature Reproduction of Display Card

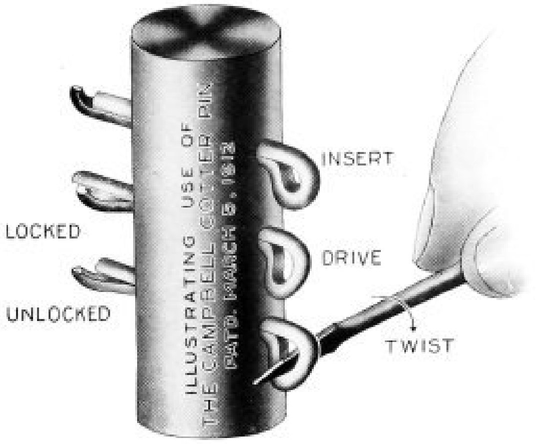


Campbell Cotter Pins



Patented March 5, 1912

Campbell Cotter Pins have three distinct features not found in the ordinary cotter pin. They are



1. *Easiest to Insert.*—As the points are close together and well tapered. Pliers unnecessary.

2. *Easiest to Lock.*—Merely drive on the head until the points are of equal length. This will partially flatten the eye and will force the shorter or straight branch forward so that its end will ride up over the upturned point of the other limb, thus automatically spreading as well as locking the pin rigidly in place.

3. *Easiest to Remove.*—Use point of screw driver, the tang of a file, a key, or any thin tool, in the eye, twisting in the direction indicated by arrow to return short shank to its original position. Then remove with fingers.

They can also be used like the ordinary cotter pin and are more easily spread, as one point projects beyond the other.

Approximate weights and quantities in each package are shown on page 230.

Campbell Cotter Pins

Large Figures denote Number Washburn & Moen Wire Gauge.

Cotter Pins are Measured under Eye

SIZE		Quantity in Standard Packages	Approx. Weight per 1000	
			Lbs.	Ozs.
16	1-16 x ½	1000		8
	" ¾	"		11
	" 1	"		14
	" 1¼	"	1	2
	" 1½	"	1	5
	" 1¾	"	1	8
	" 2	"	1	12
13	3-32 x ½	1000	1	5
	" ¾	"	1	13
	" 1	"	2	5
	" 1¼	"	2	13
	" 1½	"	3	5
	" 1¾	"	3	13
	" 2	"	4	5
	" 2½	"	5	6
11	1-8 x ½	1000	2	8
	" ¾	"	3	4
	" 1	"	4	0
	" 1¼	"	4	12
	" 1½	"	5	8
	" 1¾	500	6	4
	" 2	"	7	0
	" 2½	"	9	8
	" 3	"	11	6
9	5-32 x ¾	1000	5	2
	" 1	"	6	5
	" 1¼	500	7	8
	" 1½	"	8	11
	" 1¾	"	9	14
	" 2	"	11	2
	" 2¼	"	12	5
	" 2½	"	13	8
	" 3	"	15	9
	" 4	"	20	13
7	3-16 x ¾	1000	8	3
	" 1	"	10	0
7	3-16 x 1¼	500	11	13
	" 1½	"	13	10
	" 1¾	"	15	7
	" 2	"	17	3
	" 2¼	"	19	0
	" 2½	"	20	13
	" 3	250	24	7
	" 3½	"	28	0
	" 4	"	32	0
4	1-4 x 1	500	18	0
	" 1¼	"	20	12
	" 1½	250	23	8
	" 1¾	"	26	4
	" 2	"	29	0
	" 2¼	"	31	12
	" 2½	"	34	8
	" 3	"	40	0
	" 3½	"	45	8
	" 4	"	51	8
1	5-16 x 1	250	27	3
	" 1¼	"	34	0
	" 1½	"	38	5
	" 1¾	"	43	10
	" 2	"	46	15
	" 2¼	"	51	4
	" 2½	"	55	9
	" 3	Bulk	64	3
	" 3½	"	72	13
	" 4	"	81	7
00	3-8 x 1½	Bulk	56	14
	" 2	"	68	13
	" 2½	"	80	11
	" 3	"	92	10
	" 3½	"	104	8
	" 4	"	116	7

Made from Steel or Brass

Campbell Cotter Pins

Hardware and Agricultural Implement Assortments

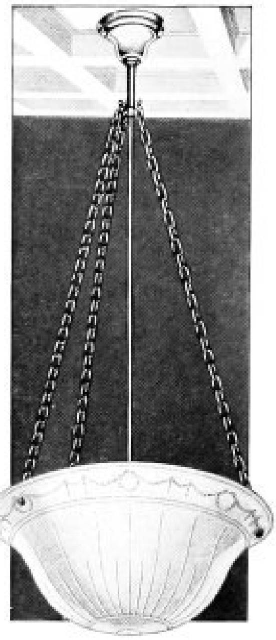
Campbell Cotter Pins packed, for convenience, in assortments especially adapted for the Hardware and Agricultural Implement trade.

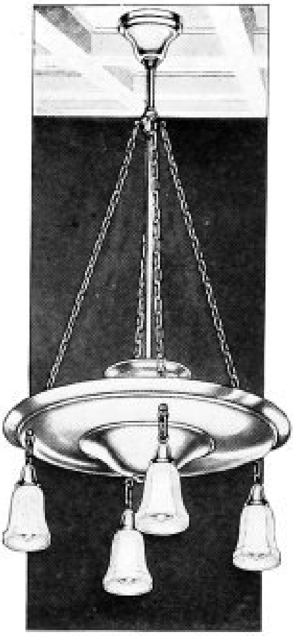
Each assortment is packed in a strong pasteboard box, 12 boxes to each carton.

Size	Assortment No. 1	Assortment No. 2	Assortment No. 3
$\frac{3}{32}$ x $\frac{3}{4}$	10	5	3
$\frac{3}{32}$ x 1	10	5	3
$\frac{1}{8}$ x 1	10	5	3
$\frac{1}{8}$ x 1$\frac{1}{4}$	10	5	3
$\frac{3}{16}$ x 1$\frac{1}{4}$	10	5	3
$\frac{3}{16}$ x 1$\frac{1}{2}$	10	5	2
$\frac{1}{4}$ x 1$\frac{3}{4}$	10	5	2
$\frac{1}{4}$ x 2	10	5	2
$\frac{5}{16}$ x 2	10	5	2
$\frac{5}{16}$ x 2$\frac{1}{2}$	10	5	2
No. Pins in Assortment	100	50	25
Approximate Weight per Carton . . .	24 lbs.	12 lbs.	5 lbs.

For Special "Auto Kit" and other assortments, see
Automobile Accessories Section

Chandelier Chain





On the following pages we illustrate styles and sizes of Chandelier Chain which meet every requirement of artistic design and finish.

This chain is made from steel wire, formed and butted, but not welded.

Furnished in the following finishes:

Bright: Highly polished.

Brush Brass: Brass-plated and lacquered to preserve natural brass color.

Flemish: Same as Brush Brass, except it is given a black nickel plate over the brass and burnished so as to present a mottled black and brass finish. This is also lacquered.

Oxidized Copper: Has an old copper color. Lacquered to preserve finish.

Nickel Plate: Bright finished chain heavily nickel-plated.

Oriental Brown: Sprayed and lacquered, giving a rich brown finish to match Japanese Gold.

Silver: Bright finished chain, silver-plated, and lacquered to retain its lustre.

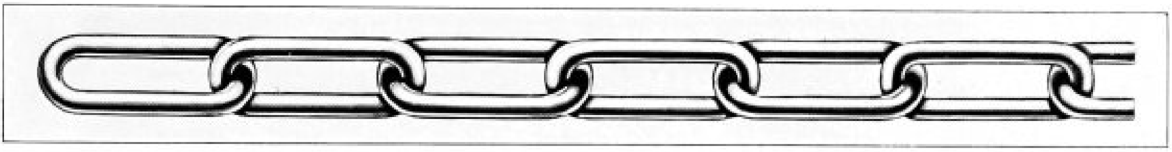
Spray Gold: Sprayed and lacquered to represent Roman Gold.

We are prepared to furnish any special finish required.

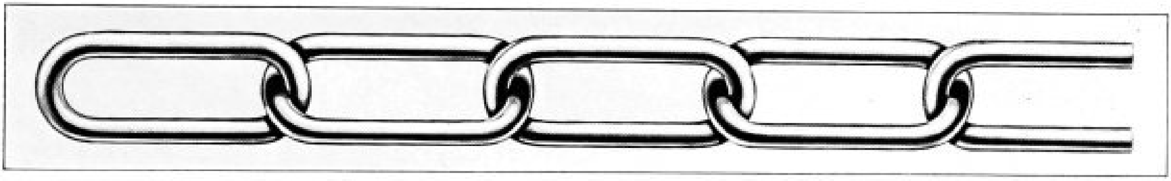
Packing: Bright chain is packed in bulk—i.e., loose in cases in lengths of 1 yard. All other finished chain is wrapped 1 yard in tough tissue paper, 10 yards to a packet—approximately 25 packets to a case. Special lengths of any finish will be furnished if so ordered.

Chandelier Chain

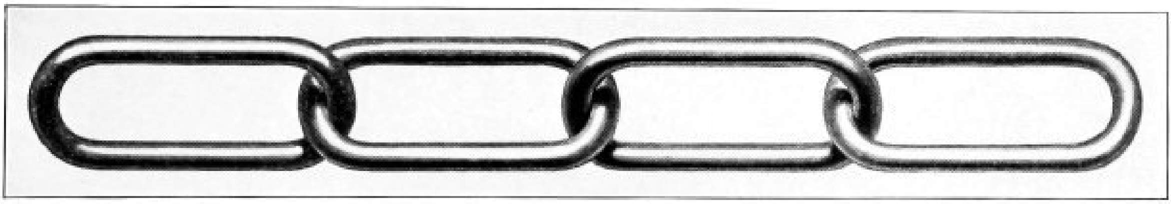
Illustrations are full size



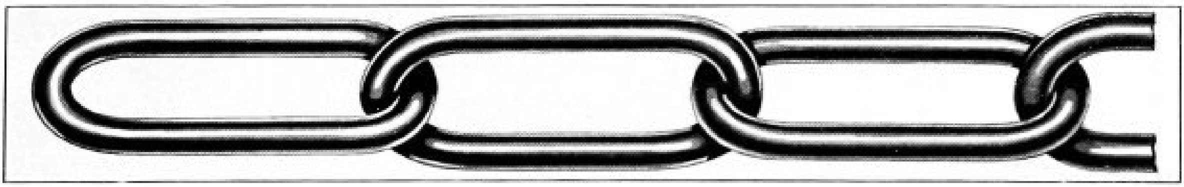
10 Ga. **No. 17210** Weight per 100 yards, 40 lbs.



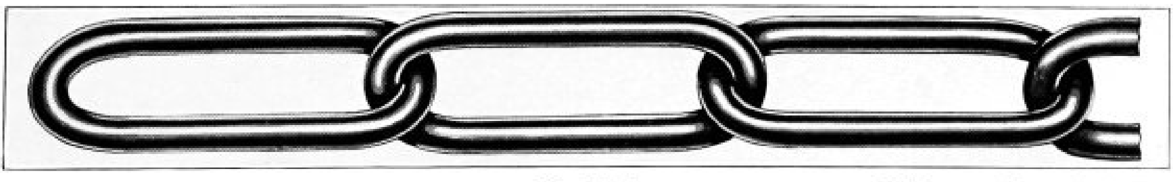
9 Ga. **No. 1939** Weight per 100 yards, 46 lbs.



8 Ga. **No. 11148** Weight per 100 yards, 57 lbs.



6 Ga. **No. 11346** Weight per 100 yards, 78 lbs.



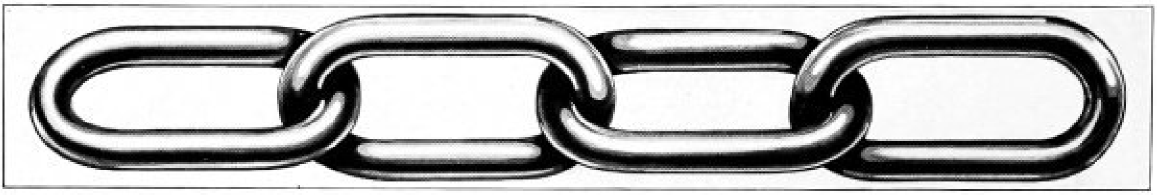
5 Ga. **No. 11345** Weight per 100 yards, 89 lbs.

Dimensions and Weights are Approximate

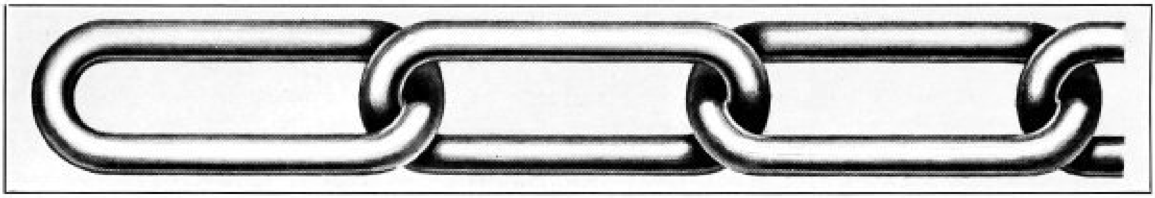
Table of Standard Wire Gauges on page 238

Chandelier Chain

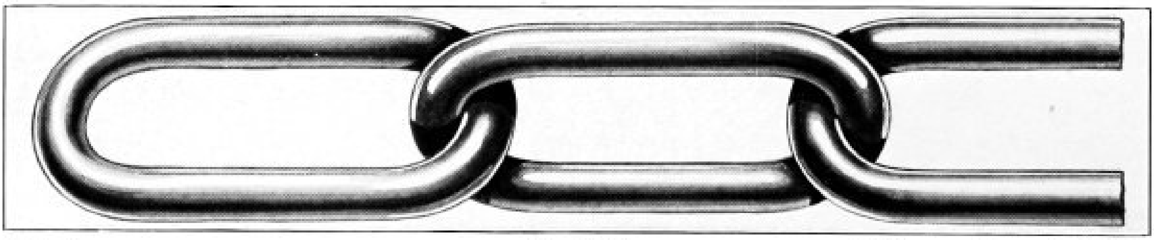
Illustrations are full size



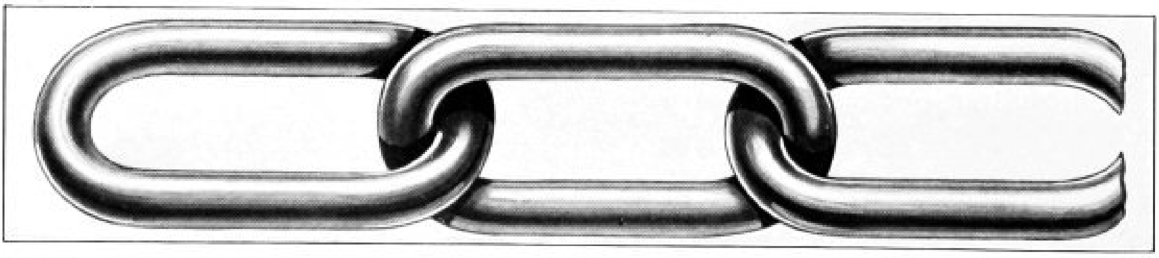
7/32-inch **No. 11044** Weight per 100 yards, 110 lbs.



7/32-inch **No. 11444** Weight per 100 yards, 103 lbs.



9/32-inch **No. 11651** Weight per 100 yards, 168 lbs.



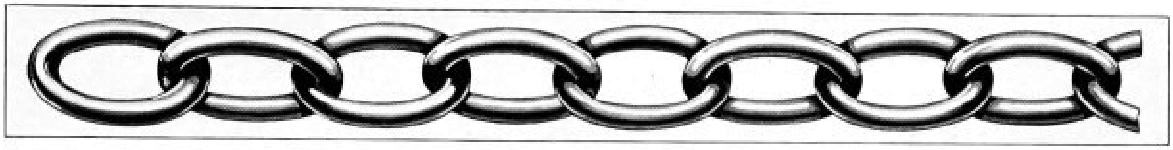
5/16-inch **No. 11450** Weight per 100 yards, 232 lbs.

Dimensions and Weights are Approximate

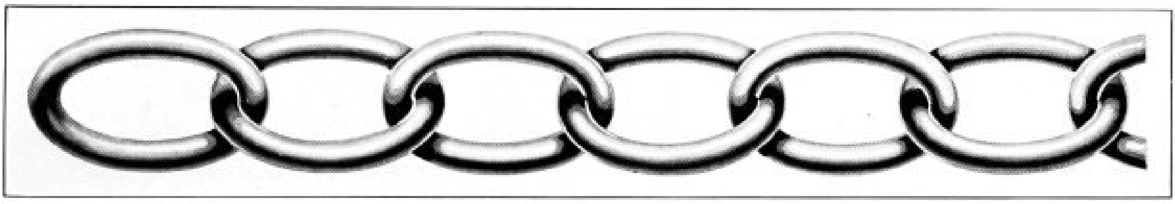
Table of Standard Wire Gauges on page 238

Chandelier Chain

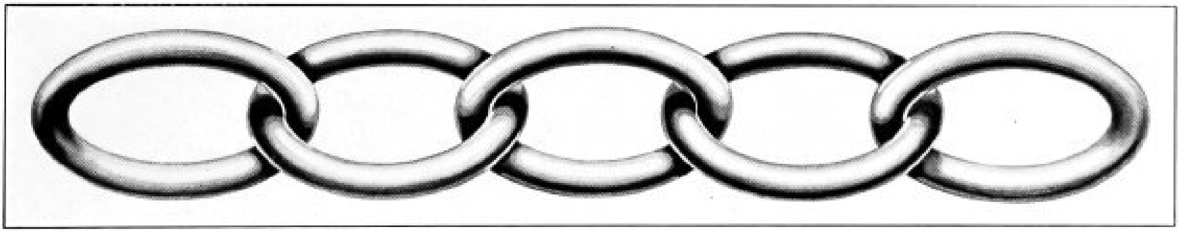
Illustrations are full size



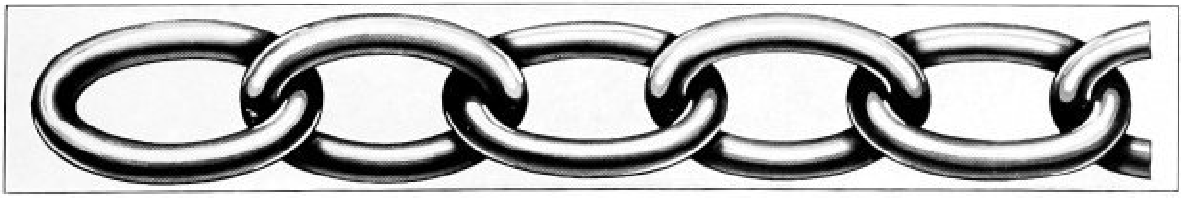
10 Ga. **No. 35310** Weight per 100 yards, 43 lbs.



8 Ga. **No. 3548** Weight per 100 yards, 70 lbs.



6 Ga. **No. 3856** Weight per 100 yards, 92 lbs.



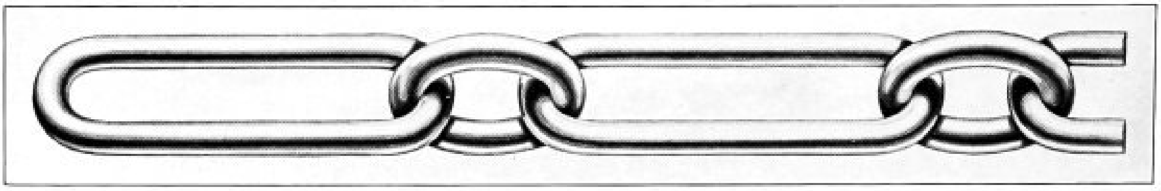
5 Ga. **No. 3855** Weight per 100 yards, 106 lbs.

Dimensions and Weights are Approximate

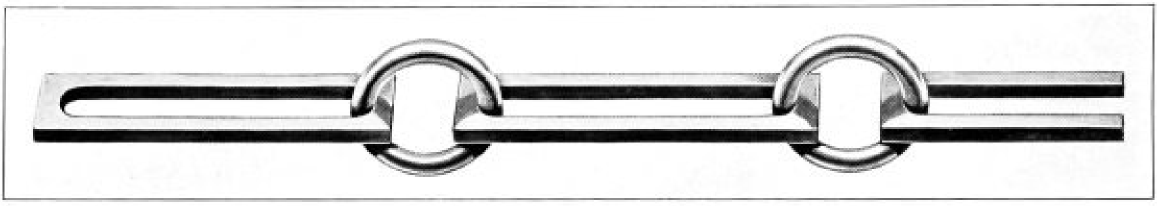
Table of Standard Wire Gauges on page 238

Chandelier Chain

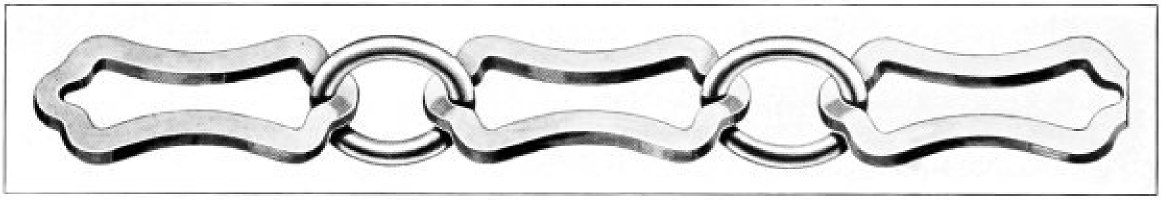
Illustrations are full size



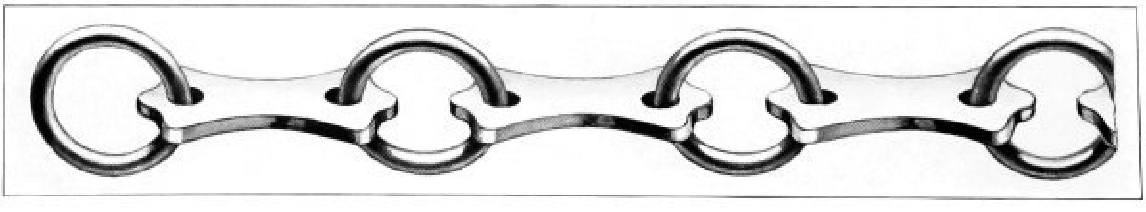
6 Ga. **No. 11536** Weight per 100 yards, 74 lbs.



Ring 11 Ga.—Flat Link .103 **No. 81311** Weight per 100 yards, 38 lbs.



Ring 11 Ga.—Flat Link .103 **No. 82110** Weight per 100 yards, 48 lbs.



Ring 11 Ga.—Flat Link .103 **No. 92110** Weight per 100 yards, 42 lbs.

Dimensions and Weights are Approximate

Table of Standard Wire Gauges on page 238

Comparative Table

of Sizes of Wire and Numbers of Chains

W. & M. Wire Gauge	Fractions of an Inch	Decimals of an Inch	Equivalent in Millimeters	Weldless				Welded	
				Tenso	Lock Link	Niagara	Jack	Coil	Machine
No. 24	....	.0230	0.58	....	....	....	No. 24	....	....
No. 23	....	.0258	0.66	....	....	....	No. 23	....	....
No. 22	....	.0286	0.73	....	....	....	No. 22	....	....
No. 21	....	.0317	0.81	....	....	....	No. 21	....	....
No. 20	....	.0348	0.88	....	....	....	No. 20	....	....
No. 19	....	.0410	1.04	....	....	....	No. 19	....	....
No. 18	....	.0475	1.20	No. 7	No. 7	....	No. 18	....	....
No. 17	....	.0540	1.37	No. 6	No. 6	....	No. 17	....	....
No. 16	....	.0625	1.59	No. 5	No. 5	No. 5	No. 16	....	....
No. 15	....	.0720	1.83	No. 4	No. 4	No. 4	No. 15	....	....
No. 14	....	.0800	2.03	No. 3	No. 3	No. 3	No. 14	....	....
No. 13	....	.0915	2.32	No. 2	No. 2	No. 2	No. 13	No. 6	....
No. 12	....	.1055	2.68	No. 1	No. 1	No. 1	No. 12	No. 5	No. 5
No. 11	....	.1205	3.06	No. 1/0	No. 1/0	No. 1/0	No. 11	No. 4	No. 4
No. 10	....	.1350	3.43	No. 2/0	No. 2/0	No. 2/0	No. 10	No. 3	No. 3
No. 9	....	.1483	3.77	No. 3/0	No. 3/0	No. 3/0	No. 9	No. 2	No. 2
No. 8	....	.1620	4.12	No. 4/0	No. 4/0	No. 4/0	No. 8	No. 1	No. 1
No. 7	....	.1770	4.50	No. 5/0	No. 5/0	No. 5/0	No. 7	No. 1/0	No. 1/0
No. 6	....	.1920	4.88	No. 6/0	No. 6/0	No. 6/0	No. 6	No. 2/0	No. 2/0
No. 5	....	.2070	5.26	No. 7/0	No. 7/0	No. 7/0	No. 5	No. 3/0	No. 3/0
....	$\frac{7}{32}$	.2187	5.56	....	....	....	....	No. 4/0	No. 4/0
No. 4	....	.2253	5.72	No. 8/0	....	....	....	....	....
No. 3	....	.2437	6.19	No. 9/0	....	....	....	....	....
....	$\frac{1}{4}$	.2500	6.35	....	....	....	....	No. 5/0	No. 5/0
No. 2	....	.2625	6.67	No. 10/0	....	....	....	....	....
....	$\frac{9}{32}$	.2812	7.14	....	....	....	....	No. 6/0	No. 6/0
....	$\frac{5}{16}$	.3125	7.94	....	....	....	....	....	No. 7/0
....	$\frac{11}{32}$	.3437	8.73	....	....	....	....	....	No. 8/0
....	$\frac{3}{8}$	.3750	9.53	....	....	....	....	....	No. 9/0
....	$\frac{13}{32}$	.4062	10.32	....	....	....	....	....	No. 10/0

Table of Standard Wire Gauges

Number of Wire Gauge	Thickness in Decimals of an Inch				
	Washburn & Moen Mfg. Co.	Birmingham or Stubbs	American or B. & S.	British Imperial Standard Wire Gauge	Paris Wire Gauge
0000	**.3938**	.454	.460	.400	. . . .
000	**.3625**	.425	.40964	.372	. . . .
00	**.3310**	.380	.3648	.348	.0157
0	**.3065**	.340	.32486	.324	.0196
1	**.2830**	.300	.2893	.300	.0236
2	**.2625**	.284	.25763	.276	.0275
3	**.2437**	.259	.22942	.252	.0314
4	**.2253**	.238	.20431	.232	.0354
5	**.2070**	.220	.18194	.212	.0393
6	**.1920**	.203	.16202	.192	.0433
7	**.1770**	.180	.14428	.176	.0472
8	**.1620**	.165	.12849	.160	.0512
9	**.1483**	.148	.11443	.144	.0551
10	**.1350**	.134	.10189	.128	.0590
11	**.1205**	.120	.090742	.116	.0630
12	**.1055**	.109	.080808	.104	.0708
13	**.0915**	.095	.071961	.092	.0787
14	**.0800**	.083	.064048	.080	.0866
15	**.0720**	.072	.057068	.072	.0944
16	**.0625**	.065	.05082	.064	.1062
17	**.0540**	.058	.045257	.056	.1181
18	**.0475**	.049	.040303	.048	.1338
19	**.0410**	.042	.03589	.040	.1535
20	**.0348**	.035	.031961	.036	.1732
21	**.0317**	.032	.028462	.032	.1929
22	**.0286**	.028	.025347	.028	.2126
23	**.0258**	.025	.022571	.024	.2322
24	**.0230**	.022	.0201	.022	.2520
25	**.0204**	.020	.0179	.020	.2756
26	**.0181**	.018	.01594	.018	.2992
27	**.0173**	.016	.014195	.0164	.3228
28	**.0162**	.014	.012641	.0148	.3464
29	**.0150**	.013	.011257	.0136	.3700
30	**.0140**	.012	.010025	.0124	.3937

Note: Wire Gauges quoted in this catalogue are to Washburn & Moen Mfg. Co.'s Standard

Automobile Accessories

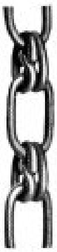
Weed De Luxe Tire Chains

Patented June 3, 1919; January 24, 1922. Other Patents Pending

The Weed De Luxe Tire Chain is a development of years of practical experience, scientific research, of laboratory and road tests to produce the most nearly perfect device most essential to motoring safety.

The Reinforcing Links superimposed on the main Cross Chains prevent breaking from excessive strains, eliminate kinking, and increase mileage.

The Twin-Loc Side Chain Link is smooth on both sides and withstands excessive strains from any angle.



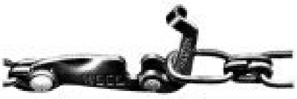
The Lever Locking Connecting Hook draws the side chains together with little effort, is securely locked with the pressure of your thumb, and remains locked under all conditions, whether the chains are loose or tight.

Weed De Luxe Tire Chains are made according to carefully determined measurements and are carefully inspected before leaving our factories.

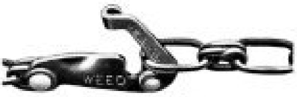
They are tested by a remarkable device which was invented in our laboratories to make accurate tests. This device has been described as "Measuring tire chain mileage by electricity." The delicate mechanism determines the capacity of the chain to stand strains and the wear and tear of the road.

The Cross Chains are hardened and brass-plated; the Side Chains are heavily galvanized, and the Connecting Hooks are red enameled.

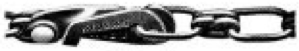
Each pair is packed in a Blue-gray Canvas Bag, plainly marked with the size of cord and fabric tires they will fit. The size is also stamped on the Connecting Hooks. Weed De Luxe Tire Chains "creep"—continually shift their position around the tires.



Engaging the Chain



Drawing It In



Locked

Standard Sizes

Size	Approx. Weight per 100 Pairs in Pounds	Size	Approx. Weight per 100 Pairs in Pounds	Size	Approx. Weight per 100 Pairs in Pounds	Size	Approx. Weight per 100 Pairs in Pounds
30 x 3½	1500	33 x 4	1770	33 x 4½	1930	34 x 5	2490
32 x 3½	1650	34 x 4	1880	34 x 4½	2030	35 x 5	2635
31 x 4	1630	35 x 4	1900	35 x 4½	2085	36 x 5	2660
32 x 4	1760	32 x 4½	1890	33 x 5	2410	37 x 5	2685

Note — Weed De Luxe Chains are made to fit Cord Tires in Corresponding Sizes

Weed De Luxe Cross Chains

Weed De Luxe Cross Chains are packed in attractively labeled boxes for shelf display, and in special counter display cartons containing one dozen boxes. They are also furnished in bags containing one hundred cross chains.

THE NAME "WEED" IS ON EVERY HOOK

Size	Approx. Weight per 100 Chains in Pounds
3½-inch	25
4 "	28
4½ "	30
5 "	40

Weed Tire Chains

Weed Tire Chains are made as carefully as the automobile on which they are used. The Weed Side Chain is made of heavy wire of high tensile strength, and is heavily galvanized to prevent rusting. The Weed Cross Chains are made of special stock and the links are smoothly welded. Each link is tested, and being cold-twisted in automatic machines, produces a chain of uniform twist, presenting a smooth surface to the tire and a broad wearing surface to the road. Weed Cross Chains are hardened under pyrometer readings. They are diamond-hard, yet not brittle, combining great strength and wearing quality.

Weed Chains do not injure tires, because they "creep," i. e., continually shift their position on the tires.

Standard Sizes

Size	Approx. Weight per 100 Pairs in Pounds	Size	Approx. Weight per 100 Pairs in Pounds	Size	Approx. Weight per 100 Pairs in Pounds	Size	Approx. Weight per 100 Pairs in Pounds
30 x 3½	1285	34 x 4	1520	34 x 4½	1700	35 x 5	2230
32 x 3½	1410	35 x 4	1550	35 x 4½	1790	36 x 5	2250
31 x 4	1335	32 x 4½	1635	33 x 5	2085	37 x 5	2310
32 x 4	1410	33 x 4½	1685	34 x 5	2105	36 x 5½	2320
33 x 4	1435						

Note — Weed Chains are made to fit cord tires in corresponding sizes. Packed one pair in a brown canvas bag.

Weed Cross Chains

Packed in attractively labeled boxes for shelf display. Also furnished in bags containing 100 Cross Chains.

THE NAME "WEED" IS ON EVERY HOOK

Size	Approx. Weight per 100 Chains in Pounds	Size	Approx. Weight per 100 Chains in Pounds
3½-inch	19	5 -inch	33
4 "	22	5½ "	39
4½ "	24		

Extra Heavy Weed Tire Chains

For Passenger Cars

Extra Heavy Weed Tire Chains for Passenger Cars are offered to meet the demand for Heavy Duty Chains in sections where unusually trying conditions of use are found. They are particularly intended for mountain work and for use in heavy gumbo, where chains are subjected to extraordinary and continual traction strains.

They are constructed throughout of heavier material than is employed in Regular Weed Tire Chains of corresponding sizes, and consequently afford greater traction on muddy roads and give longer service. The Cross Chains are of "Weed" quality, hardened, and the complete chain shows a sturdy, durable device designed for hard service.

Standard Sizes

Size	Approx. Weight per 100 Pairs in Pounds	Size	Approx. Weight per 100 Pairs in Pounds	Size	Approx. Weight per 100 Pairs in Pounds	Size	Approx. Weight per 100 Pairs in Pounds
30 x 3½	1620	32 x 4	2350	32 x 4½	2500	33 x 5	2980
32 x 3½	1830	33 x 4	2380	34 x 4½	2625	35 x 5	3030
31 x 4	2250	34 x 4	2510	35 x 4½	2660	36 x 5	3050
						37 x 5	3200

Packed one pair in a Brown Canvas Bag.

Cross Chains

THE NAME "WEED" IS ON EVERY HOOK

Size	Approx. Weight per 100 Chains in Pounds	Size	Approx. Weight per 100 Chains in Pounds
3½-inch	26	4½-inch	36
4 "	32	5 "	58

Weed Chains for Pneumatic Truck Tires

Heavy Duty Pneumatic Tires have to a considerable extent displaced Solid Tires as equipment for trucks, particularly on trucks of small or moderate capacity. Weed Chains for Pneumatic Truck Tires afford an efficient traction and anti-skid device for this type of tire. They are made especially strong to meet the requirements of truck service. Side Chains, Cross Chains and Hooks are all made of extra heavy material, to withstand excessive strains resulting from use on high-power commercial vehicles operating under heavy loads. Weed Chains for Pneumatic Truck Tires are of "Weed" type construction—constantly "creeping," thus continually changing their position on the tire. They are of "Weed" quality, the Cross Chains being hardened to afford longer service. Packed one pair in a canvas bag.

Standard Sizes

Size	Appr. Wght per 100 Pairs in Pounds	Size	Appr. Wght per 100 Pairs in Pounds	Size	Appr. Wght per 100 Pairs in Pounds	Size	Appr. Wght per 100 Pairs in Pounds	Size	Appr. Wght per 100 Pairs in Pounds	Size	Appr. Wght per 100 Pairs in Pounds
*32 x 4½	2800	33 x 5	2980	*35 x 5	3060	*36 x 6	4000	*38 x 7	5750	*42 x 9	7200
*34 x 4½	2910	34 x 5	3010	36 x 5	3085	38 x 6	4300	*40 x 8	6500	*44 x 10	9900

* Standard Truck Tire Sizes.

THE NAME "WEED" IS ON EVERY HOOK

Cross Chains

Size	Approx. Weight per 100 Chains in Pounds	Size	Approx. Weight per 100 Chains in Pounds
4½-inch	36	8-inch	140
5 "	58	9 "	150
6 "	83	10 "	230
7 "	130		

Weed Chains
for Solid Tires

Weed Chains for Solid Tires are an efficient traction and anti-skid device for single and dual solid truck tires. They are made especially strong and so constructed that they satisfactorily meet the requirements of heavy truck service.

Standard Sizes
For Single Solid Tires

Size	Appr. Wght per 100 Pairs in Pounds	Size	Appr. Wght per 100 Pairs in Pounds	Size	Appr. Wght per 100 Pairs in Pounds	Size	Appr. Wght per 100 Pairs in Pounds	Size	Appr. Wght per 100 Pairs in Pounds	Size	Appr. Wght per 100 Pairs in Pounds
32 x 3	1640	34 x 3½	2710	36 x 4	3425	36 x 5	4880	36 x 6	6550	36 x 7	6800
36 x 3	1920	36 x 3½	2800	34 x 4½	3200	38 x 5	5280	38 x 6	6600	38 x 7	6900
30 x 3½	2400	32 x 4	2900	36 x 4½	3450	40 x 5	5630	40 x 6	7250	36 x 8	8000
32 x 3½	2570	34 x 4	3200	34 x 5	4400	34 x 6	4880				

For Dual Solid Tires

36 x 3	3650	36 x 3½	5000	36 x 4	6000	40 x 4	6900	38 x 5	8300	40 x 6	9400
34 x 3½	4800	34 x 4	5300	38 x 4	6500	36 x 5	8200	40 x 5	9200	40 x 7	10100

Packed one pair in a Canvas Bag.

Cross Chains

Size	Approx. Wt. per 100 Chains in Pounds Single Solid	Approx. Wt. per 100 Chains in Pounds Dual Solid	Size	Approx. Wt. per 100 Chains in Pounds Single Solid	Approx. Wt. per 100 Chains in Pounds Dual Solid
3 -inch	36	95	5-inch	120	245
3½ "	58	130	6 "	185	255
4 "	72	170	7 "	200	295
4½ "	83	183	8 "	230	

Rid-O-Skid Tire Chains

Rid-O-Skid Chains are offered to meet the requirements of those who demand an anti-skid device at a low price. They are necessarily of inferior quality. Haven't as many cross chains and are not heat-treated, as are those on the Weeds, and the side chains are not plated to prevent rusting.

Rid-O-Skid Chains do not injure tires, because they "creep," i. e., continually shift their position on the tires.

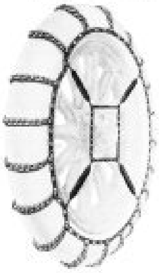
Standard Sizes

Size	Approx. Weight per 100 Pairs in Pounds	Size	Approx. Weight per 100 Pairs in Pounds	Size	Approx. Weight per 100 Pairs in Pounds	Size	Approx. Weight per 100 Pairs in Pounds
30 x 3	960	31 x 4	1140	34 x 4	1290	34 x 4½	1330
30 x 3½	895	32 x 4	1160	32 x 4½	1240	35 x 4½	1390
32 x 3½	1030	33 x 4	1225	33 x 4½	1300	36 x 4½	1410

Packed one pair in a canvas bag.

Weed Chain Adjusters

Patented March 29, 1910



Weed Chain Adjusters consist of four or six springs (according to size), radiating from a center chain surrounding the hub, and are attached by simple hooks to the side chain. The adjuster draws the chains evenly to the tires—holds them right, fairly taut, but not tight. Packed one pair in a carton.

Standard Sizes

Passenger Car Chain Adjusters

Size	Approx. Weight per 100 Pairs in Pounds
28–30 in.	125
32–34 "	130
35–36 "	185
37–38 "	240

Pneumatic Truck Chain Adjusters

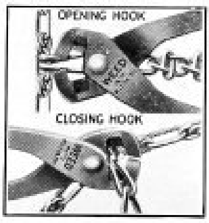
Size	Approx. Weight per 100 Pairs in Pounds
32 x 4½	161
34 x 4½	165
35 x 5	306
36 x 6	311
38 x 7	390
40 x 8	551
42 x 9	544

Solid Truck Chain Adjusters

Size	Size of Chain used on	Approx. Weight per 100 Pairs in Pounds
30–32 in.	3 in., 3½ in. and 4 in. Single Solid	234
34–36 "	3 " 3½ " and 4 " Single Solid	334
34–36 "	4½ " 5 " and 6 " Single Solid	415
38–40 "	6 " and 7 " Single Solid	573
38–40 "	8 " and 10 " Single Solid	624
34–36 "	3 " and 3½ " Dual Solid	415
34–36 "	4 " 5 " and 6 " Dual Solid	573
38–40 "	4 " 5 " and 6 " Dual Solid	624
36–40 "	7 " and 8 " Dual Solid	624

Weed Pliers

Patented July 29, 1913



Weed Pliers for repairing Weed Tire Chains, easily open and close the hooks of the cross chains while the chain is on the tire. Packed one dozen in a carton; 12 cartons in a case. Approximate weight per gross, 143 pounds.

Weed Chains for Motorcycles

Weed Tire Chains for Motorcycles are constructed of material particularly adapted to use on light motor vehicles, being strong but not of excessive size and weight.

A specially designed end connecting hook affords a positive lock and avoids any possibility of the chains becoming detached in service. The Cross Chains are heat-treated, affording a hard, tough, durable chain, and are brass-plated. The Side Chains are galvanized, to prevent rusting. Weed Tire Chains for Motorcycles occupy little space and can be easily carried in the tool box when not in use. They are packed one chain in a small canvas bag.

Standard Sizes

Size	Approx. Weight per 100 Chains in Pounds	Size	Approx. Weight per 100 Chains in Pounds
26 x 3	325	27 x 3½	545
28 x 3	370	29 x 3½	575

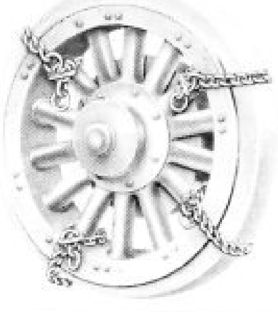
Cross Chains

Size	Approx. Weight per 100 Chains in Pounds
3–inch	10
3½–inch	20

American Emergency Unit Chains

Patented March 18, 1919

For Single and Dual Solid Tires



"American" Emergency Unit Chains are complete in themselves, requiring no expensive and troublesome attachments. No felloe plates. No spoke clamps, which for other types of unit chains must be stocked in large assortments to fit the various sizes and shapes of spokes.

"American" Emergency Unit Chains are made to fit all sizes of single and dual solid tires.

Standard Sizes

Size	Approximate Weight per 100 Pieces		Approximate Weight per Package of 12	
	Single Solid	Dual Solid	Single Solid	Dual Solid
3-inch	210 lbs.	....	25 lbs.	....
3½-inch	215 "	295 lbs.	26 "	36 lbs.
4-inch	225 "	380 "	27 "	46 "
5-inch	260 "	425 "	31 "	51 "
6-inch	285 "	575 "	34 "	69 "
7-inch	380 "	610 "	46 "	73 "

Packed in bags of 12 pieces

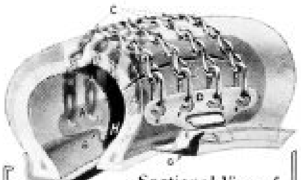
Dobbins Blow-Out Chains

Patented June 18, 1912, and June 24, 1913

Dobbins Blow-Out Chains reinforce the shoe and hold the worst blow-out so securely that it becomes the strongest part of the tire.

Given the severest tests—500-mile runs with the worst sort of blow-outs — over rocks, through deep sand, mud and snow — Dobbins Blow-Out Chains always "made good." They securely held a very badly blown-out tire on a car that was stalled in a river bed partly made up of quicksand, and a careful examination failed to reveal a particle of sand or moisture between the shoe and the inner tube.

These tests proved that Dobbins Blow-Out Chains actually "sand and water-proof" the compartment between the patch and the tube, and place the device in a class by itself.



Sectional View of Dobbins Blow-Out Chain in Place

A - Main Plate
B - Bent Lip on Main Plate
C - Cross Chains
D - Second Plate
E - Auxiliary Hook
F - Curved Slots Permitting adjustment for due amount of tension
G - Rim of Wheel
H - Inner Patch
J - Blow-Out

Dobbins Blow-Out Chains are made in two styles: For Clincher and Straightside Tires. With each chain is packed an inner patch that is placed directly over the hole or cut, on the inside of the shoe, with the sticky side next to the casing. Full directions packed with each chain. They are easily attached. Packed one chain in a carton.

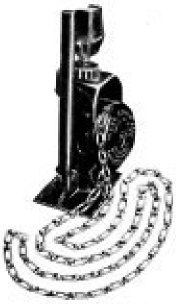
Standard Sizes

For 3 -inch tires
For 3½-inch tires
For 4-inch tires
For 4½-inch tires
For 5 -inch tires

When ordering state whether wanted for Clincher or Straightside Tires

Weed Chain-Jacks for Passenger Cars

Patented February 29, 1916, and May 23, 1916



10-inch Jack

The Weed Chain-Jack, with extension handle, discloses very desirable operating features as compared with the usual ratchet type Jack. When not in use the handle is telescoped to its smallest size and rests snugly against the side of the Jack, as illustrated on the left. A sudden upward jerk quickly extends the handle to its full length, while a smart rap with palm of hand promptly telescopes it to its original size.

To operate a Weed Chain-Jack it is not necessary to get down in a cramped position and grovel in mud and grease under a car to work a jack handle that is apt to fly up with unpleasant results.

To lift a car with the Weed Chain-Jack, simply give a few pulls on its chain while you stand away from springs, tire carriers and other projections. To lower the car, pull the chain in the opposite direction.

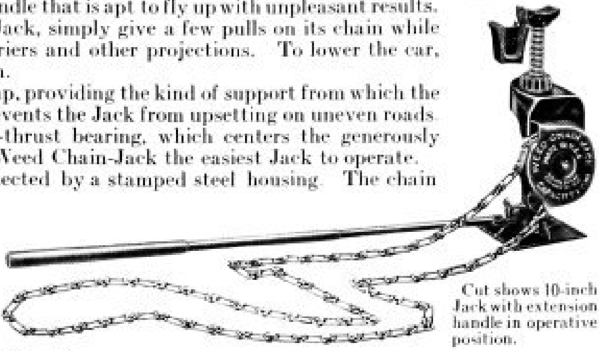
The Weed Chain-Jack has a strong cap, providing the kind of support from which the axle will not slip, while a broad base prevents the Jack from upsetting on uneven roads.

Gears of the proper ratio and ball-thrust bearing, which centers the generously proportioned lifting screw, make the Weed Chain-Jack the easiest Jack to operate.

Gears and chain wheel are well protected by a stamped steel housing. The chain is heavily plated to prevent rusting. Every Weed Chain-Jack is tested to 1-ton capacity.

The Weed Chain-Jack for Passenger Cars is made in 8-inch, 10-inch and 12-inch sizes. The 8-inch and 10-inch Jacks are made with an auxiliary step as illustrated.

The auxiliary step in operative position adds two inches to the height of the Jack.



Cut shows 10-inch Jack with extension handle in operative position.

Specifications

Size	Height When Lowered	Maximum Rise	Height When Raised	Height When Raised With Auxiliary Step Up	Lifting Capacity	Weight
8-in.	8 in.	4½ in.	12½ in.	14½ in.	1 ton	11 lb. 13 oz.
10-in	10 in.	5⅜ in	15⅜ in.	17⅜ in.	1 ton	12 lb. 6 oz.
12-in.	12 in.	6½ in.	18½ in.	Has No Aux. Step	1 ton	12 lb. 9 oz.

Weed Chain-Jacks are packed one Jack in a strong carton, 12 cartons in a case.

American Tire Lock Chains

Made of the flat link American type steel chain. They are superior tire lock chains because of the flat links, which give the chain a straplike action, permitting their being drawn closely around tires and tire-holders, affording real protection against automobile and tire thieves.

We also have a popular-priced chain (No. 20) made of Bright Twist Link Coil Chain, and a special extra-heavy chain (No. 70) made of Case-Hardened Bright Twist Link Coil Chain.

They are easily attached — are strong, noiseless, and when not in use take up small space in the tool box.

These chains are furnished regularly without lock. However, when so specified, they will be furnished with either No. 200 Wrought Steel Japanned-Case Padlock or No. 300 Ward and Lever Japanned-Case Padlock at an additional charge.

American Tire Lock Chains are packed one dozen in a carton.

Specifications

Number of Chain	Length in Inches	Type of Chain	Covering	Approximate Weight per 100 Chains in Pounds
20	36	Twist Link	Imitation Leather	85
20	42	" "	" "	100
*20-H	36	" "	Auto Leather	85
*20-H	42	" "	" "	100
*70	36	" "	" "	285
42	36	Flat Link American	Imitation Leather	105
62	36	" " "	Auto Leather	105
621	42	" " "	" "	125
622	44	" " "	" "	135
623	48	" " "	" "	145
52	36	" " "	Oil Tanned Leather	105
521	42	" " "	" " "	125
522	44	" " "	" " "	135
523	48	" " "	" " "	145

*Case-Hardened.

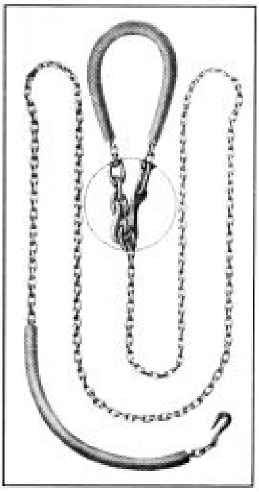
All Tire Lock Chains are furnished Bright.

Please order by number.

American Welded Towing Chains

Supplied in five sizes to satisfactorily meet the insistent demands for a real, serviceable, non-kinkable and compact towing device. Made of proof-tested welded coil chain with a special grab-hook on each end.

Length and strength of each size was determined after careful tests and thorough investigations of all conditions under which all passenger cars and trucks are towed. Each size, therefore, will safely tow the passenger cars or trucks for which it was designed, as specified below. Use the proper size for the work required and you will get good service. Packed one chain in a strong canvas bag.



No. 2800—Designed for lightweight passenger cars. Length over all, 18 feet. Breaking strain, 3000 pounds. Approximate weight, 13 pounds. Made of ¼-inch (17-64) chain with 24 inches of strong canvas tubing on each end. Chain and hooks are cold galvanized.

No. 2801—Designed for medium and heavyweight passenger cars. Length over all, 20 feet. Breaking strain, 8000 pounds. Approximate weight, 34 pounds. Made of ⅜-inch (13-32) chain with 24 inches of strong canvas tubing on each end. Chain and hooks are cold galvanized.

No. 2802—Designed for 1 to 2 ton trucks. Length over all, 25 feet. Breaking strain, 8000 pounds. Approximate weight, 42 pounds. Made of ⅜-inch (13-32) chain. Finish of chain and hooks, self-colored.

No. 2803—Designed for 3 to 4 ton trucks. Length over all, 25 feet. Breaking strain, 11,500 pounds. Approximate weight, 56 pounds. Made of $\frac{7}{16}$-inch (15-32) chain. Finish of chain and hooks, self-colored.

No. 2804—Designed for 5 to 7 ton trucks. Length over all, 25 feet. Breaking strain, 15,000 pounds. Approximate weight, 71 pounds. Made of ½-inch (17-32) chain. Finish of chain and hooks, self-colored.

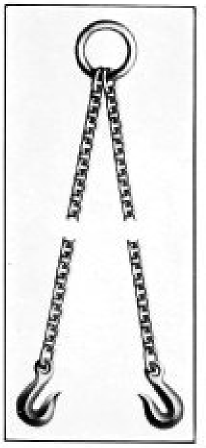
Acco Automobile Sling Chains

To lift motors and transmissions from the chassis, raise a front or a rear end whenever replacing springs or removing axles, and do a hundred and one other odd jobs of heavy lifting where absolute safety is the first essential.

A block and tackle or a portable crane, with an equipment of "Acco" Auto Sling Chains, makes a complete hoisting outfit that will save many hours of labor and prevent accidents.

"Acco" Auto Sling Chains are general utility chains as well. Besides being invaluable for lifting, they can be used as emergency towing chains, binding chains, and for many similar uses for which the grab-hooks make them most convenient. These grab-hooks make possible quick and easy adjustments, as they can be hooked in at any point on the chain.

Made in two sizes—one tested for a safe working load of 2000 pounds and designed for the largest and heaviest motors, and the other tested for a safe working load of 1200 pounds, designed for medium-sized motors, such as the Dodge, Maxwell, Reo and Ford.



Specifications

¼-inch "Acco" Automobile Sling Chain—designed for use with light and medium-weight cars. Length of each branch, over all, 5½ feet. Safe working load, 1200 pounds. Approximate weight, 8 pounds. Made of ¼-inch (17-64) proof-tested welded coil chain with a ring on one end and a grab-hook on each free end. Finish of chain, ring and grab-hooks, self-colored. Packed one chain in a strong canvas bag.

$\frac{5}{16}$-inch "Acco" Automobile Sling Chain—designed for use with heavyweight cars. Length of each branch, over all, 9¾ feet. Safe working load, 2000 pounds. Approximate weight, 21 pounds. Made of $\frac{5}{16}$-inch (11-32) proof-tested welded coil chain with a ring on one end and a grab-hook on each free end. Finish of chain, ring and grab-hooks, self-colored. Packed one chain in a strong canvas bag.

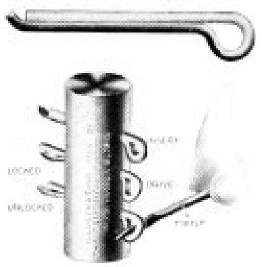
American Muffler Cut-Out Chain

An ideal link for Muffler Cut-outs. It works smoothly through the pulley. Will not kink. Can be installed with less effort than cable or any other substitute. The chain necessary for an installation costs so little and the difference between the cost of this and any other material for the purpose is so far outweighed that this chain should be used in every case. Made of flat links. Strong, yet light. Furnished in heavy electro copper plate. Packed in bags of 100 feet or on reels of 500 feet. Approximate weight per 100 feet, 3½ pounds.

Campbell Hammerlock Self-Spreading Cotter Pins

Patented March 5, 1912

The Campbell Hammerlock Self-Spreading Cotter Pin is the most economical and practical cotter pin on the market, and is especially adapted for quick repairs on automobiles.



All operations being done from the eye end, the pin may be easily locked in places where the points are inaccessible to spread in the manner necessary with the old type.

Easiest to Insert.—As the points are together and well tapered. Pliers unnecessary.

Easiest to Lock.—Merely drive on the head until the points are of equal length. This will partially flatten the eye and will force the shorter or straight branch forward so that its end will ride up over the upturned point of the other limb, thus automatically spreading as well as locking the pin rigidly in place.

Easiest to Remove.—Use point of screwdriver, the tang of a file, a key or any thin tool, in the eye, twisting to return the short shank to its original position. Then remove with fingers.

Note.—In addition to being used with its self-spreading feature, the Campbell Hammerlock Self-Spreading Cotter Pin may also be used in the same manner as the ordinary cotter pin. When so used, it is much easier to spread than the ordinary pin because one point extends beyond the other.

Automotive Sizes

Large Figures give Number of Washburn & Moen Mfg. Co. Standard Wire Gauge

	Size (Length Measured Under the Head)	Quantity in Packages	Approximate Weight per 1000 Lbs.	Oz.
16	1-16 x ½	1000		8
	" ¾	"		11
	" 1	"		14
	" 1¼	"	1	2
	" 1½	"	1	5
	" 1¾	"	1	8
	" 2	"	1	12
13	3-32 x ½	"	1	5
	" ¾	"	1	13
	" 1	"	2	5
	" 1¼	"	2	13
	" 1½	"	3	5
	" 1¾	"	3	13
	" 2	"	4	5
	" 2½	"	5	6
11	1-8 x ½	"	2	8
	" ¾	"	3	4
	" 1	"	4	0
	" 1¼	"	4	12
	" 1½	"	5	8
	" 1¾	500	6	4
	" 2	"	7	0
	" 2½	"	9	8
	" 3	"	11	6
9	5-32 x ¾	1000	5	2
	" 1	"	6	5
	" 1¼	500	7	8
	" 1½	"	8	11
	" 1¾	"	9	14
	" 2	"	11	2
	" 2¼	"	12	5
	" 2½	"	13	8
	" 3	250	15	9
	" 4	"	20	13
7	3-16 x ¾	1000	8	3
	" 1	"	10	0
	" 1¼	500	11	13
	" 1½	"	13	10
	" 1¾	"	15	7
	" 2	"	17	3
	" 2¼	"	19	0
	" 2½	"	20	13
	" 3	250	24	7
	" 3½	"	28	0
	" 4	"	32	0

Campbell Hammerlock Self-Spreading Cotter Pins are made in a full range of sizes. Sizes not listed will be furnished on request. 5-64 inch, 7-64 inch and 9-64 inch diameters are not listed above but are furnished to the extent that they may be in stock, or when required in sufficient quantities of a size to warrant being made up. Made from Steel or Brass.

Motor Assortment

Campbell "Hammerlock" COTTER PINS
Motor
Ass't.
100
AMERICAN CHAIN COMPANY, INC.

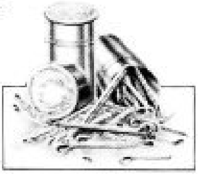
A variety of 100 Pins, sizes most commonly used, put up in a strong pasteboard box. Packed 100 boxes in a carton.

Size	Quantity	Size	Quantity
1-16x ½	17	3-32x1½	5
1-16x1	14	1-8x ½	8
1-16x1¼	9	1-8x1	12
3-32x1	29	1-8x1½	6

Automobile Kit Assortment

A variety of 100 Pins, sizes most commonly used, put up in a brass screw-top box, nickel-plated. Just right for auto kit. Packed 12 boxes in a carton

Size	Quantity	Size	Quantity
1-16x ½	17	3-32x1½	5
1-16x1	14	1-8x ½	8
1-16x1¼	9	1-8x1	12
3-32x1	29	1-8x1½	6

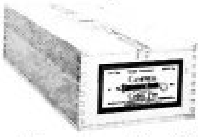


Automobile Dealers' Assortment

A variety of 1000 Pins, sizes most commonly used, put up in a strong pasteboard carton. Packed 36 cartons in a case.

Size	Quantity	Size	Quantity	Size	Quantity
1-16x ½	100	3-32x ¾	100	1-8x1½	20
1-16x ¾	100	3-32x1	150	1-8x2	20
1-16x1	100	3-32x1½	100	5-32x1½	20
1-16x1½	100	1-8x ¾	50	5-32x1¾	20
3-32x ½	60	1-8x1	60		

Garage Assortment



A variety of 3000 Pins, sizes most commonly used by the automobile trade. Packed in a strong wooden box.

Size	Quantity	Size	Quantity	Size	Quantity
1-16x ½	250	3-32x ¾	300	5-32x ¾	100
1-16x ¾	250	3-32x1	500	5-32x1¼	100
1-16x1	250	1-8x ¾	250	3-16x1	50
1-16x1¼	250	1-8x1	250	3-16x1¼	50
3-32x ½	300	1-8x1¼	100		

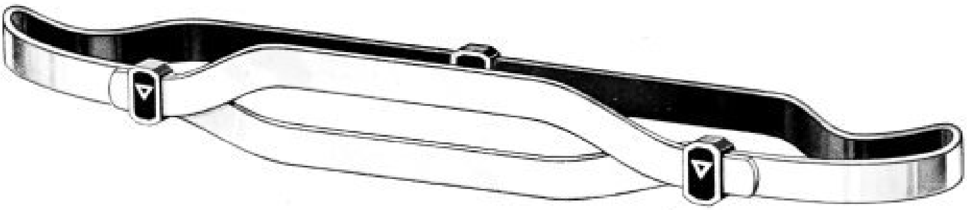
Weed Bumpers

Weed Bumpers are made of the best spring steel adapted to the purpose, hardened in oil and tempered. The line covers a range of designs to meet the needs of any car distributor or dealer.

There is a type adapted to every car, and a fitting for every car, as shown in Specification Circular furnished on request. Supplied in two finishes: Nickel, and Black Enamel.

Weed Bumpers are passed by the National Board of Fire Underwriters and their use carries a substantial reduction in the premium on collision insurance.

Bars and fittings packed separately unless otherwise specified.



Weed "Sturdy" Spring-Bar Bumper

R-2——Weed Sturdy Front Bumper Bar, 2¼ x ⅜ inches, with full back bar. Length 58 inches. Weight, packed, 49 pounds.
R-3——Weed Sturdy Front Bumper Bar, 2¼ x ⅜ inches, with cutout back bar to allow for crank. Length 58 inches. Weight, packed, 43 pounds.
R-10——Weed Sturdy Rear Bumper Bar, 2¼ x ⅜ inches, with 34-inch cutout in back bar to allow for tire. Length 64 inches. Weight, packed, 45 pounds.
R-124—Weed Sturdy Rear Bumper Bar, 2¼ x ⅜ inches, with 37¼-inch cutout in back bar to allow for tire Length 64 inches. Weight, packed, 44 pounds.

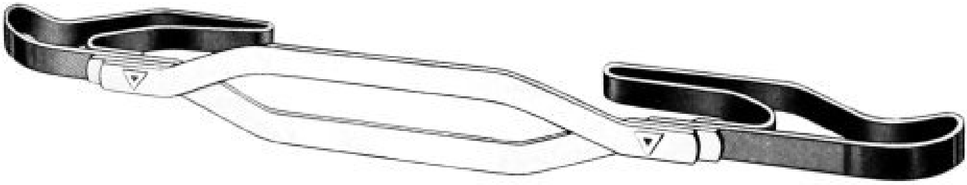
Order bars and fittings by number as shown in Specification Circular

Weed "Safety" Spring-Bar Bumper

Same design as cut above

R-4——Weed Safety Front Bumper Bar, 2 x 5/16 inches, with full back bar. Length 58 inches. Weight, packed, 39 pounds.
R-5——Weed Safety Front Bumper Bar, 2 x 5/16 inches, with 21-inch cutout in back bar to allow for crank. Length 58 inches. Weight, packed, 34 pounds.
R-11——Weed Safety Rear Bumper Bar, 2 x 5/16 inches, with 34-inch cutout in back bar to allow for tire. Length 64 inches. Weight, packed, 36 pounds.
R-125—Weed Safety Rear Bumper Bar, 2 x 5/16 inches, with 37½-inch cutout in back bar to allow for tire Length 64 inches. Weight, packed, 35 pounds.
R-159—Weed Safety Rear Bumper Bar—Special for the Dodge. Weight, packed, 33 pounds.

Order bars and fittings by number as shown in Specification Circular

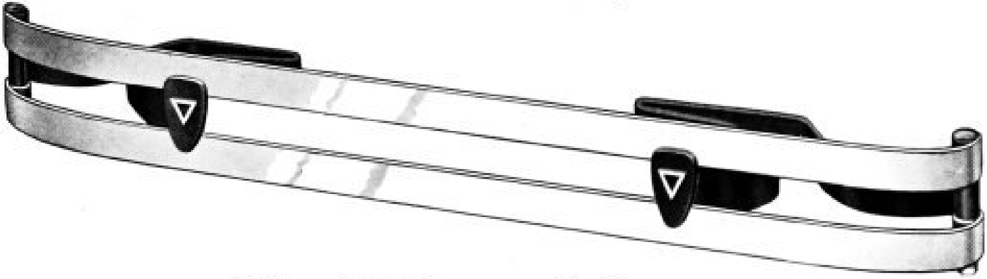


Weed "Service" Bumper

R-6——Weed Service Front Bumper Bar, 1¾ x ¼ inches. Length 58 inches. Weight, packed, 33 pounds.
R-12——Weed Service Rear Bumper Bar, 1¾ x ¼ inches. Length 64 inches. Weight, packed, 35 pounds.
R-165—Weed Service Rear Bumper Bar—Special for the Dodge. Weight, packed, 33 pounds.

Safety Fittings are used with this bar and a pair of shims is furnished with each bar to accommodate the fittings to the bar. Order bars by number as specified above and fittings as specified in Specification Circular.

Weed Bumpers



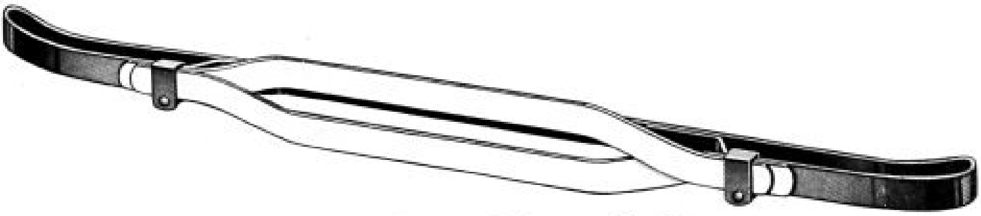
Weed "Sentry" Bumper

R-163—Weed Sentry Front Bumper Bar, 1¼ x ¼ inches; 1¾ inches space between 2 bars. Length 58 inches. Weight, packed, 35 pounds.

R-164—Weed Sentry Rear Bumper Bar, 1¾ x ¾ inches; 1¾ inches space between 2 bars. Length 64 inches. Weight, packed, 37 pounds.

R-169—Weed Sentry Rear Bumper Bar—Special for the Dodge. Weight, packed, 35 pounds.

Safety Fittings are used with this bar and a pair of shims is furnished with each bar to accommodate the fittings to the bar. Order bars by number as specified above and fittings as specified in Specification Circular.

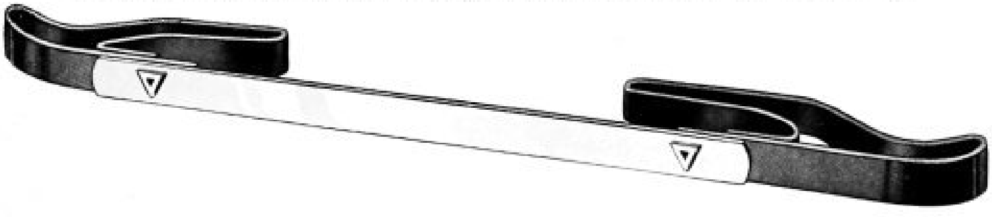


Weed "Safety Type" Bumper

Made only for the following cars:

R-73—Weed Safety Bumper, Chevrolet 490 Type Front. Weight, packed, 47 pounds.
R-72—Weed Safety Bumper, Chevrolet 490 Type Rear. Weight, packed, 44 pounds.
R-160—Weed Safety Bumper, Chevrolet Superior Type Front. Weight, packed, 45 pounds.
R-161—Weed Safety Bumper, Chevrolet Superior Type Rear. Weight, packed, 52 pounds.
R-86—Weed Safety Bumper, Ford Type Front. Weight, packed, 46 pounds.
R-71—Weed Safety Bumper, Ford Type Rear. Weight, packed, 52 pounds.
R-154—Weed Safety Bumper, Gray Type Front. Weight, packed, 44 pounds.
R-155—Weed Safety Bumper, Gray Type Rear. Weight, packed, 45 pounds.
R-74—Weed Safety Bumper, Overland 4 Type Front. Weight, packed, 43 pounds.
R-75—Weed Safety Bumper, Overland 4 Type Rear. Weight, packed, 49 pounds.
R-152—Weed Safety Bumper, Star Type Front. Weight, packed, 40 pounds.
R-153—Weed Safety Bumper, Star Type Rear. Weight, packed, 42 pounds.

Safety Type Bumpers are 1¾ x ¼ inches, length 59 inches, and are packed complete with fittings for the particular car specified. These are quick turnover items. Bars and Fittings are not packed separately.



Weed "Hoover" Single Bar Bumper

R-8—Weed Hoover Single Bar Bumper Front Bar, 2 x ⅜ inches. Length 58 inches. Weight, packed, 32 pounds.
R-14—Weed Hoover Single Bar Bumper Rear Bar, 2 x ⅜ inches. Length 64 inches. Weight, packed, 34 pounds.
R-166—Weed Hoover Single Bar Bumper Rear Bar—Special for the Dodge. Weight, packed, 32 pounds.

Safety Fittings are used with this bar. Order bars by number as specified above and fittings as specified in Specification Circular.

Metric Conversion Table

Lineal Measure

Millimeters and Inch Equivalents

Millimeters	Decimal Inch Equivalent	Nearest Inch and Fraction Equivalent	Millimeters	Decimal Inch Equivalent	Nearest Inch and Fraction Equivalent
1	.03937	1/32	39	1.53543	1 17/32
2	.07874	5/64	40	1.57480	1 9/16
3	.11811	7/64	41	1.61417	1 39/64
4	.15748	5/32	42	1.65354	1 41/64
5	.19685	3/16	43	1.69291	1 11/16
6	.23622	15/64	44	1.73228	1 47/64
7	.27559	17/64	45	1.77165	1 49/64
8	.31496	5/16	46	1.81102	1 13/16
9	.35433	11/32	47	1.85039	1 27/32
10	.39370	25/64	48	1.88976	1 57/64
11	.43307	27/64	49	1.92913	1 59/64
12	.47244	15/32	50	1.96850	1 31/32
13	.51181	½	51	2.00787	2
14	.55118	35/64	52	2.04724	2 3/64
15	.59055	19/32	53	2.08661	2 5/64
16	.62992	⅝	54	2.12598	2⅛
17	.66929	21/32	55	2.16535	2 5/32
18	.70866	45/64	56	2.20472	2 13/64
19	.74803	¾	57	2.24409	2 15/64
20	.78740	25/32	58	2.28346	2 9/32
21	.82677	53/64	59	2.32283	2 5/16
22	.86614	55/64	60	2.36220	2 23/64
23	.90551	29/32	61	2.40157	2 25/64
24	.94488	15/16	62	2.44094	2 7/16
25	.98425	63/64	63	2.48031	2 15/32
26	1.02362	1 1/64	64	2.51968	2 33/64
27	1.06299	1 1/16	65	2.55905	2 35/64
28	1.10236	1 3/32	66	2.59942	2 19/32
29	1.14173	1 9/64	67	2.63879	2⅝
30	1.18110	1 11/64	68	2.67816	2 43/64
31	1.22047	1 7/32	69	2.71753	2 23/32
32	1.25984	1¼	70	2.75690	2¾
33	1.29921	1 19/64	71	2.79627	2 51/64
34	1.33858	1 21/64	72	2.83564	2 53/64
35	1.37795	1⅜	73	2.87501	2⅞
36	1.41732	1 13/32	74	2.91438	2 29/32
37	1.45669	1 29/64	75	2.95375	2 61/64
38	1.49606	1 31/64	76	2.99312	2 63/64

1 mm. = 0.03937 inch or approximately 1/32 inch
1 cm. = 0.3937 inch or approximately 25/64 inch
1 dc. = 3.937 inches or approximately 3 15/16 inches
1 m. = 39.37 inches or approximately 39⅜ inches
1 m. = 3.28083 feet or approximately 3 9/32 feet

Metric Conversion Table

Lineal Measure

Inches and Millimeter Equivalents

Inches	Equivalent in Millimeters	Inches	Equivalent in Millimeters	Inches	Equivalent in Millimeters
1	25.40	18	457.20	35	889.00
2	50.80	19	482.60	36	914.40
3	76.20	20	508.00	37	939.80
4	101.60	21	533.40	38	965.20
5	127.00	22	558.80	39	990.60
6	152.40	23	584.20	40	1016.00
7	177.80	24	609.60	41	1041.40
8	203.20	25	635.00	42	1066.80
9	228.60	26	660.40	43	1092.20
10	254.00	27	685.80	44	1117.60
11	279.40	28	711.20	45	1143.00
12	304.80	29	736.60	46	1168.40
13	330.20	30	762.00	47	1193.80
14	355.60	31	787.40	48	1219.20
15	381.00	32	812.80	49	1244.60
16	406.40	33	838.20	50	1270.00
17	431.80	34	863.60		

Fractional Parts of an Inch and Millimeter Equivalents

1/16	1.59	⅜	9.53	11/16	17.46
⅛	3.18	7/16	11.11	¾	19.05
3/16	4.76	½	12.70	13/16	20.64
¼	6.35	9/16	14.29	⅞	22.23
5/16	7.94	⅝	15.88	15/16	23.81

To find the Millimeter Equivalent from above tables for 8⅞ inches

Example: 8 inches = 203.20 millimeters
⅞ inch = 22.23 millimeters
Total, 8⅞ inches = 225.43 millimeters

1 inch .... = 25.40 millimeters
1 foot (12 inches) = 304.80 millimeters
1 yard (3 feet) .. = .9144018 meter
1 fathom (6 feet) = 1.8288036 meters

Metric Conversion Table

Weights

Pounds and Equivalents in Kilograms

Pounds	Equivalent in Kilograms	Pounds	Equivalent in Kilograms	Pounds	Equivalent in Kilograms
1	.4536	20	9.0720	39	17.6904
2	.9072	21	9.5256	40	18.1440
3	1.3608	22	9.9792	41	18.5976
4	1.8144	23	10.4328	42	19.0512
5	2.2680	24	10.8864	43	19.5048
6	2.7216	25	11.3400	44	19.9584
7	3.1752	26	11.7936	45	20.4120
8	3.6288	27	12.2472	46	20.8656
9	4.0824	28	12.7008	47	21.3192
10	4.5360	29	13.1544	48	21.7728
11	4.9896	30	13.6080	49	22.2264
12	5.4432	31	14.0616	50	22.6800
13	5.8968	32	14.5152		
14	6.3504	33	14.9688	60	27.2160
15	6.8040	34	15.4224	70	31.7520
16	7.2576	35	15.8760	80	36.2880
17	7.7112	36	16.3296	90	40.8240
18	8.1648	37	16.7832	100	45.3600
19	8.6184	38	17.2368		

Fraction of a Pound and Equivalents in Kilograms

1/16 (1 oz.)	.02835	7/16 (7 oz.)	.19845	13/16 (13 oz.)	.36855
⅛ (2 oz.)	.05670	½ (8 oz.)	.22680	⅞ (14 oz.)	.39690
3/16 (3 oz.)	.08505	9/16 (9 oz.)	.25515	15/16 (15 oz.)	.42525
¼ (4 oz.)	.11340	⅝ (10 oz.)	.28350	1 (16 oz.)	.45360
5/16 (5 oz.)	.14175	11/16 (11 oz.)	.31185		
⅜ (6 oz.)	.17010	¾ (12 oz.)	.34020		

Example:

To find the Kilogram Equivalent for 124¾ pounds
100 pounds = 45.3600 kilograms
24 pounds = 10.8864 kilograms
¾ pound = .3402 kilogram
Total, 124¾ pounds = 56.5866 kilograms

Metric Conversion Table

Weights

Kilograms and Equivalents in Pounds

Kilograms	Equivalent in Pounds	Kilograms	Equivalent in Pounds	Kilograms	Equivalent in Pounds
1	2.2046	20	44.0920	39	85.9794
2	4.4092	21	46.2966	40	88.1840
3	6.6138	22	48.5012	41	90.3886
4	8.8184	23	50.7058	42	92.5932
5	11.0230	24	52.9104	43	94.7978
6	13.2276	25	55.1150	44	97.0024
7	15.4322	26	57.3196	45	99.2070
8	17.6368	27	59.5242	46	101.4116
9	19.8414	28	61.7288	47	103.6162
10	22.0460	29	63.9334	48	105.8208
11	24.2506	30	66.1380	49	108.0254
12	26.4552	31	68.3426	50	110.2300
13	28.6598	32	70.5472		
14	30.8644	33	72.7518	60	132.2760
15	33.0690	34	74.9564	70	154.3220
16	35.2736	35	77.1610	80	176.3680
17	37.4782	36	79.3656	90	198.4140
18	39.6828	37	81.5702	100	220.4600
19	41.8874	38	83.7748		

Index

A Page

A. B. S. Shackles 30–31
   “ Stud Link Chain 25–27
   “ Swivels 34
Acco Automobile Sling Chains . . 246
   “ Halter Chains 98
   “ Key Rings 228
   “ Oil Well Stretcher Jack . . 57
   “ One-Piece Guard Rail . . . 52–53
   “ Round Cord Pulley Chain . 217
   “ Stud Link Chain 25
   “ “ “ Shackles . . . 30–31
Adjusters, Weed Chain 243
Ajax Breast Chains 112
   “ Dredge Chain 22–23
   “ Steel Loading Chain . . . 14–15
Alaskan Kennel Chains 204
American Arc Lamp Chain 212
   “ Chain Over-Shoes 135
   “ Coil Chain 171–174
   “ Cow Ties 205
   “ Dog Chains 193
   “ “ Leads 197, 201
   “ Emergency Unit Chains . 244
   “ Halter Chains 193
   “ Kennel Chains 203
   “ Loom Friction Chain . . 175–176
   “ Muffler Cut-out Chain . 246
   “ Sash Chain 214–216
   “ “ “ Fixtures . . 215
   “ Seal Pin Chains 213
   “ Tire Lock Chains . . . 245
   “ Welded Towing Chains . 246
Anchor Chain, Stud Link 24–29
   “ “ Close Link 35
   “ “ Shackles 30–33
   “ “ Swivels 34
Anti-Skid Chains 240–244

Page

Anti-Spreader Chains—Welded . . 71
   “ “ “ —Weldless . 213
Arc Lamp Chain 212
Attachments:
   “S” Hooks, Special Hooks, Screw Eyes, Ceiling Hooks, Eye Bolts, Repair Links, Round Eyes, etc. . 218–227
Automobile Accessories 239–249
   “ Assortments, Campbell Cotter Pins . . . 247
   “ Bumpers 248–249
   “ Sling Chains 246
   “ Tire Chains 240–244
   “ Towing Chains . . . 246

B

BB Coil Chain 8–9
   “ “ “ Twist Link 12–13
BBB Coil Chain 10–11
Back Strap Rings 154
Bearer Dees and Clips 149
Bell Clevis Couplings 55
Benders, Rail 50
Binding Chains 67
Bits 159–168
Block Chain 37
Blow-out Chains (Dobbins) . . . 244
Bolts (Eye) 226
Boom Chains 58–60
   “ Chain Toggles 61
Brake Chains (Electric Car) . . . 43
Breast Chains 112–117
   “ Chain Snaps 158
Breeching Chains, Cart 122
   “ Rings 137–138
Bridle Squares 140
Buckles, Loop 148
Bumpers 248–249

Index — *Continued*

Page
Bureau Veritas Stud Link Chain . 25
Butt Chains 105

C

"C" Links 103
Cable Chain 24–29
Campbell Cotter Pins . . 229–231, 247
Car Replacers 48
Cargo Nets 36
Cart Back Chains 122
" Breeching Chains 122
Ceiling Hooks 226
Chain Adjusters, Weed . . . 243
Chain Dogs 62
Chain-Jacks, Weed 245
Chain Mouth Bits 163
" Nets, Cargo 36
" Over-Shoes, American . . . 135
" Pliers, Weed 243
Chandelier Chain 232–236
Chin Chains 119
Clamps, Guard Rail 47
" Replacer 49
Clevis Repair Links 227
Clip Cockeyes 151
Clips for Cockeyes 149, 151
" " Hames 152–153
Close Link Stream Chain . . . 35
Cockeyes 150–152
Cockeye Toggles 156
Coil Chain:
  American 171–174
  BB 8–9
  BBB 10–11
  Common 6–7
  Elwel, Straight Link 88–89
  " Twist Link 86–87
  Lock Link 181–182
  Niagara 183–184
  Proof 6–7

Page
Coil Chain—*Continued:*
  Tenso 177–180
  Twist Link, Proof and BB . . 12–13
Cold Shuts 82–83
Collar Strap Slides 145
Common Coil Chain 6–7
Compromise Joints for Rails . . 51
Concord Hame Clips 152
" Toggles 156–157
Conversion Tables 250–253
Conveyor Chain 16–17
Conway Loop Buckles 148
Cotter Pins, Campbell . . 229–231, 247
" " (Automobile Assortments) 247
Couplers, Dog 204
Coupling Pins 56
Couplings, Mine Car 54–56
Cow Ties:
  American 205
  Closed Ring 100, 207
  El-Wel-Co Ties 99–100
  Niagara 207
  Open Ring 100, 207
  Ohio Pattern 99, 205–206
  Tenso 206–207
Cross Chain Pliers, Weed . . . 243
Cross Chains for Extra Heavy Tires 241
" " " Motorcycle Tires 243
" " " Pneumatic Truck Tires 242
" " " Solid Tires . . 242
" " " Weed De Luxe Tire Chains . . . 240
" " " Weed Tire Chains 241
Curb Chains 119
Curves, Safe Working Load . . 4
Cut-out Chain, American Muffler . 246

D

Dees 142–150
Dixie Flank Chains 118

Index — *Continued*

Page

Dixie Pole Chains 118
Dobbins Blow-out Chains 244
Dog Chains:
  American 193
  Elwel 97
  Lock Link 195
  Niagara 196
  Tenso 194
Dog Couplers 204
Dog Leads:
  American 197
  Assortments of 202
  For small dogs 201
  Lock Link 199
  Niagara 200
  Tenso 198
Dogs, Chain 62
  " Ring 63–65
Dredge Chain 18–23

E

Electric Car Brake Chain 43
Elwel Pattern Chain:
  Coil—Straight Link 88–89
    " —Twist Link 86–87
  Machine—Straight Link 92–93
    " —Twist Link 90–91
  Passing Link 96
  Truck Chain 94–95
Elwel Breast Chains 113–117
  " Cow Ties 99–100
  " Dog Chains 97
  " Halter Chains 97
Elweltra Trace Chains 105–111
Emergency Unit Chains 244
End-Gate Chains 73
Engine Replacers 48
Eyebolts 226
Eyes, Round 227
Extra Heavy Weed Tire Chains 241

Page

F

Factories i, iii
Fifth Chains 72
Finishes on Chandelier Chain 232
  " " Sash Chain 216
  " " Welded Chain 5
  " " Weldless Chain 170
Fixtures, Sash Chain 215
Flank Chains (Dixie Pattern) 118
Friction Chain, American Loom 175–176

G

Grab Hooks 79
  " " (Railroad) 45–46
Guard Rails 52–53
  " " Clamps 47

H

H. B. Dredge Chain 20–21
Halter Chains:
  Acco 98
  American 193
  Elwel 97
  Lock Link 195
  Niagara 196
  Tenso 194
Halter Loops and Rings 141
  " Squares 140
Hame Clips 152–153
  " Hooks 155
  " Line Rings 154
  " Staples 153
Hammock Chains 210
Hangers, Ox-Bow 211, 225
  " Screw-Hook 211
Harness Chains 104–135
  " Hardware 136–168
  " Loops, Twin 148
  " Rings 137–139
Heavy Duty Chain 18–23
  " Weed Chains 241

Index — *Continued*

Page
Heel Chains 123–134
Hitchings, Mine Car 54–56
Hobble Chains 118
Hooks, “S” 218–224
  “ Ceiling 226
  “ Grab 79
  “ Hame 155
  “ Pinery 149
  “ Railroad Grab 45–46
  “ Sling Chain 80
  “ Slip 78
  “ Train Chain 45–46
Hoover Single Bar Bumper, Weed 249
Horse Over-Shoes, American Chain 135

J

Jack Chain, Single 185–186
  “ “ Double 187
Jacks, Stretcher 57
  “ (Weed Chain-Jacks) . . . 245
Jockey Chains 120
Joints, Compromise 51

K

Kennel Chains 203
  “ “ Alaskan 204
Key Rings 228

L

Ladder Chain 189
Lamp (Arc) Chain 212
Lap Links 102
  “ Rings 103
Layer Loops 147–148
Lazy Chains 120
Leads, Dog 197–202
Links, “C” 103
  “ Clevis Repair 227
  “ Lap 102
  “ Repair 101
Lloyd’s Shackles 32–33
  “ Stud Link Chain 25, 28–29

Page
Lloyd’s Swivels 34
Loading Chain, Ajax Steel 14–15
Lock Chains, Wagon 71
  “ “ Tire 245
  “ Link Coil Chain 181–182
  “ “ Dog Chains 195
  “ “ “ Leads 199, 201
  “ “ Halter Chains 195
  “ “ Kennel Chains 203
  “ “ Tie-Out Chains 208
Log Chains 66–68
  “ Chain Swivels 81
  “ Haul-up Chain 16–17
Long-Link Log Chains 66
Loom Friction Chain 175–176
Loops, Halter 141
  “ Layer 147–148
  “ Tug 139
  “ Twin Harness 148
Lumber Heel Chains 133

M

Machine Chain, Elwel Straight Link 92–93
  “ “ “ Twist Link 90–91
Malleable Ring Bits 164–165
  “ Swivels 81
Method of Measuring Chain Links 3
Metric Conversion Tables 250–253
Mine Car Couplings 54–56
Motorcycle Tire Chains, Weed . . 243
Muffler Cut-out Chain, American . 246

N

Nets, Chain Cargo 36
Niagara Alaskan Kennel Chains . . 204
  “ Coil Chain 183–184
  “ Cow Ties 206–207
  “ Dog Chains 196
  “ “ Leads 200–201
  “ Halter Chains 196

Index — *Continued*

Page
Niagara Jockey Chains 120
“ Kennel Chains 203–204
“ Pipe-Hanging Chains 211

O
Offices i
Oil Well Stretcher Jacks 57
Ox Chains 66
Ox-Bow Chain Hangers 211, 225
Overcheck Bits 165
Over-Shoes, American Chain 135

P
Passing Link Chain 96
Picket Chains 208
Pinery Hooks and Dees 149
Pins, Campbell Cotter 229–231, 247
“ Coupling 56
Pipe-Hanging Chain, Niagara 211
Pliers, Weed 243
Plumbers Chain 190
Pneumatic Truck Tire Chains 242
Pocket Wheel Chain 37
Pole Chains 69
“ “ (Dixie Pattern) 118
“ Strap Dees 145
Porch Swing Chains:
Y-Type 209
4-Piece Sets 210
Proof Coil Chain 6–7
“ “ “ —Twist Link 12–13
Pulley Chain, Acco Round Cord 217
Pump Chain 192

R
Race Bits 165
Rafting Chains 58–60
“ Chain Toggles 61
Rail Benders 50
“ Clamps 47
“ Step Joints 51

Page
Rails, Guard 52–53
Railroad Chains 41–43
“ Hooks 45–46
“ Switch Chains 44
Register Chain 188
Rein Chains 119
Repair Links 101
“ “ Clevis 227
Replacers, Car and Engine 48
Replacer Clamps 49
Rid-O-Skid Tire Chains 243
Ring Bits 163–168
“ “ Wire 159–160
“ Dogs 63–65
Rings, Back Strap 154
“ Breeching 137–138
“ Halter 141
“ Hame Line 154
“ Harness 137–139
“ Gee Haw 155
“ Key 228
“ Lap 103
“ Weights of Welded 84
River Towing Chains 60
Round Eyes 227
“ Cord Pulley Chain 217

S
“S”-Hooks 218–224
Safe (Register) Chain 188
“ Working Load Curves 4
Safety Bumper, Weed 248
“ Type Bumper, Weed 249
“ Chain 191
Sash Chain 214–216
“ “ Fixtures 215
Scotch Rein Chains 119
Screw Dees 146
“ Hook Hangers 211

Index — *Continued*

Page
Seal Pin Chains 213
Sentry Bumper, Weed 249
Service Bumper, Weed 248
Shackles, A. B. S. 30–31
" Lloyd's 32–33
" Round Pin 74–75
" Screw Pin 76–77
Single Bar Bumper, Weed Hoover 249
Slides, Collar Strap 145
Sling Chains, Acco Automobile . . 246
" " Single 38
" " Double 39
" Chain Capacities 40
" " Hooks 80
Slip Hooks 78
Snaffle Bits, Wire 161–162
Snaps, Breast Chain 158
Sprocket Wheel Chain 16–17
Solid Tire Truck Chains 242, 244
Spring-Bar Bumper, Weed 248
Squares 140–141
Stage Traces 109–111
Stake Chains 108
Stallion Chains 119
Staples, Hame 153
Stay Chains 69
Steel Loading Chain, Ajax 14–15
Steering Gear Chain (H. B. Dredge) 20–21
Step Joints for Rails 51
Stream Chain 35
Stretcher Chains 70
" Jacks, Oil Well 57
Stud Link Chain 24–29
" " Shackles 30–33
" " Swivels 34
Sturdy Bumper, Weed 248
Swing Chains, Porch:
Y-Type 209
4-Piece 210

Page
Switch Chains, Railroad 44
" Chain Hooks 45–46
Swivels, Malleable Log Chain . . 81
" Stud Link 34

T

Tables:
Metric Conversion 250–253
Standard Wire Gauges 238
Sizes of Wire 237
Numbers of Chains 237
Tail-Board Chains 73
Tenso Anti-Spreader Chains . . . 213
" Coil Chain 177–180
" Cow Ties 206–207
" Dog Chains 194
" " Leads 198, 201
" Halter Chains 194
" Hammock Chains 210
" Kennel Chains 203
" Porch Swing Chains . . . 209–210
" Seal Pin Chains 213
" Tie-out Chains 208
Testing Machine . . . . iv–v
Tie-out Chains 208
Ties, Cow 99–100, 205–207
Tire Chain Adjusters, Weed . . . 243
" Chains for Motorcycles, Weed 243
" " " Pneumatic Tires, 240, 241, 242, 243
" " " Solid Tires . . . 242, 244
" " Rid-O-Skid 243
" " Unit Type 244
" " Weed . . 240, 241, 242, 243
" " Weed De Luxe . . . 240
" " Weed Extra Heavy . 241
Tire Lock Chains, American . . 245
Toggles, Cockeye 156
" Concord 156–157
" for Boom Chains 61

Index—*Continued*

Page
Tongue Chains 69
Tow Chains for River Navigation . 60
Towing Chains, Automobile . . . 246
Trace Chains, Butt 105
" " Elweltra 106–107
" " Handy (No 57) . . 129
" " Stage 109–111
" Dees 150
" Squares 141
Train Chains 44
" Chain Hooks 45–46
Truck Chain, Elwel 94–95
Tug Chains 121
" Loops 139
Twin-Loc Side Chain 240
Twist Link Coil Chain:
  Elwel 86–87
  Proof and BB 12–13
Twist Link Machine Chain, Elwel . 90–91

U

Unit Chains, American Emergency 244

W

Wagon Chains:
  Anti-Spreader—Welded . . . 71
  " " —Weldless . . . 213
  End-Gate 73
  Fifth 72
  Lock 71
  Pole 69
  Stretcher 70
  Stay 69

Page
Wagon Chains—*Continued*:
  Tail-Board 73
  Tongue 69
Weed De Luxe Tire Chains . . . 240
" Chains for Pneumatic Tires, 240, 241, 242, 243
" " " Solid Tires . . 244
" " " Motorcycle Tires 243
" Chain Adjusters 243
" Chain-Jacks 245
" Cross Chains . . 240, 241, 242, 243
" Extra Heavy Tire Chains . 242
" Hoover Bumpers 249
" Pliers 243
" Safety Bumpers 248
" Safety Type Bumpers . . 249
" Sentry Bumpers 249
" Service Bumpers 248
" Spring-Bar Bumpers . . . 248
" Sturdy Bumpers 248
" Tire Chains . . 240, 241, 242, 243
Welded Chain 1–103
Weldless Chain 169–236
Well Chain 192
Wheel Chain, Pocket 37
" " Sprocket 16–17
Wilson Bits 166
Wire Ring Bits 159–160
Wire Snaffle Bits 161–162
Wire Gauges 238
Wire Sizes 237
Wrought Bits 167–168

CARNEGIE LIBRARY OF PITTSBURGH
3 1812 04075 5168